DOCUMENT RESUME

ED 215 542 EC 142 402

AUTHOR	Compton, David M.; And Others
TITLE	Assessment of Environmental Barriers to Leisure: A Literature Review.
INSTITUTION	North Texas State Univ., Denton. Div. of Recreation and Leisure Studies.
SPONS AGENCY	Office of Special Education and Rehabilitative Services (ED), Washington, DC.
PUB DATE	May 81
GRANT	G008005886
NOTE	132p.
EDRS PRICE	MF01/PC06 Plus Postage.
DESCRIPTORS	*Accessibility (for Disabled); *Delivery Systems; Design Requirements; Environmental Influences; *Evaluation Methods; *Leisure Time; *Physical Disabilities; Physical Mobility; *Recreational Activities; Social Environment; Testing
IDENTIFIERS	*Assessment Environ Barriers Leisure Experiences

ABSTRACT

The report on preliminary administration of the AEBLE (Assessment of Environmental Barriers to Leisure Experiences) instrument to 18 orthopedically impaired children reveals five factors (all but the family support) to be considered problems: community reaction resources, architectural barriers, accessible and available transportation, community support services, and caregiver support. Tables with statistical data are given. The manual for AEBLE utilization presents the rationale and description of the instrument, administration procedures, estimated time of administration, general instructions, instructions for scoring, interpretation of the instrument, and AEBLE development. The AEBLE interview guide and instructions contain profile sheets for each of the six factors, a description of the AEBLE plan, and sample forms. (SB)

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ASSESSMENT OF ENVIRONMENTAL BARRIERS TO LEISURE: A LITERATURE REVIEW

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EC142402

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This project was supported in part by Grant No. G008005886, CFDA 13.443A, from the Office of Special Education, U.S. Department of Education. The opinions expressed herein do not necessarily reflect the opinion of the Office of Special Education or North Texas State University and no official endorsement should be inferred.

TABLE OF CONTENTS

Introduction i

Section I

Physical Environment 3

Built Environment 3

Natural Environment 7

Ambient Environment 8

Socio-Communicative 12

Temporal Environment 16

Summary 18

Section II

Human Environment 20

Living Arrangements 21

Institutional Arrangements 24

Individual Differences 27

Roles of Individuals 30

Implications for the Orthopedically Impaired 35

Summary 38

TABLE OF CONTENTS (CONT'D)

Section III

Organizational/Political Environment 41

Service Delivery Systems 41

Leisure Service Delivery Systems. 44

Policies and Regulations 45

Economic Status 48

Implications for Leisure 51

Implications for the Handicapped 52

Summary 55

Bibliography 58

Introduction

This review of literature represents a synthesis of literature regarding environmental barriers to leisure functioning. The specific purpose of this review is to identify the relevant literature concerning the leisure functioning of handicapped children. This report represents the first step in the development of the Assessment of Environmental Barriers to Leisure Experiences assessment instrument.

A large amount of literature exists describing the physical barriers in the environment such as architectural barriers. Additional information regarding the social or human barriers was found in the fields of psychology, sociology, education, and recreation.

The primary focus of this literature was to identify barriers in the environment which would affect the leisure functioning of orthopedically impaired children. Environmental barriers were separated into three categories: physical, human, and organizational/political. The physical environment was further divided into several subcategories: built or man-made, ambient, socio-communicative, and temporal. The human environment includes living arrangements, individual differences, and role of individuals. The organization/political environment is comprised of service delivery systems, policy and regulations, and economic status. The chapters contain a general discussion of the barriers

as well as implications for the orthopedically impaired.

The empirical research addresses many obvious as well as subtle barriers within the environment, from architectural designs to attitudes of service providers. The literature suggests that an awareness of existing barriers will facilitate integration of the handicapped into the mainstream of life.

SECTION I

PHYSICAL ENVIRONMENT

Introduction

This chapter contains a review of current literature dealing with the physical environment as it pertains to mobility barriers. The physical environment is composed of the following subcategories: built, natural, ambient, socio-communicative, and temporal. These aspects of the total physical environment contain barriers that prevents or restricts free interchange or movement by individuals attempting to use certain facilities (Servedio, 1979).

Built Environment

The movement to achieve a barrier free physical environment is on the rise now due to social legislative forces (McGaughey, 1976). This means that those who are responsible for design and implementation of building, parks, playgrounds, roads, etc., will have to combine their resources in order to provide adequate accessibility to all populations. This section deals with man-made buildings, roads, bridges, equipment, playgrounds, parks, and the barriers of each section.

Buildings, public and private, constitute a large problem in accessibility to the handicapped. It is imperative that existing facilities be modified to eliminate mobility barriers (i.e., ramps, elevators, toilet accessibility, wider doors, etc.). Proposed facilities need to

be examined carefully beforehand to modify any barrier that has been overlooked by the architect. Stephens (1978) states that in order to achieve this, "architects, construction companies, and facility professionals should work together to provide a better facility for all populations."

Accessible buildings help to increase a person's self-worth due to the interaction with others and with the environment (Gordon, 1973; Stephens, 1978). If a person is unable to attend functions located in a particular building, there can be no cognitive or social growth for that person in that particular activity/function. The damage to the self-concept and effective social behavior must be fully considered in determining policies and standards on barrier free design (McGaughey, 1976; Stephens, 1978).

The main barriers in buildings discussed in the literature were narrow entranceways, stairs, protruding thresholds, revolving doors, inadequate lighting, inaccessible toilets, telephones, drinking fountains, etc. Even the building location can have a detrimental effect due to the idea of segregation and alienation for the handicapped child (Stephens, 1978).

Many buildings have a sterile atmosphere which makes it seem more institutional in nature. Other buildings have a "child-like" atmosphere which can promote a loss of self-worth for the handicapped person (Stephens, 1978).

A building should be psychologically accessible for those who utilize it in addition to being physically accessible.

Playgrounds provide an excellent outlet for all children. There are often many physical barriers which exclude handicapped children from participating in activities. More emphasis is being placed on the integration of handicapped children into the playground environment. This includes creating an atmosphere for cognitive growth, social integration, and skill development (Ware & Lance, 1978; Richter, 1978).

The designs for these barrier free playgrounds are extremely creative and innovative. Even swings, see-saws, and climbing bars are now being designed for the handicapped. Also sand boxes, foam, wading streams and pools, and grass hills are created for total accessibility. Playgrounds can be accessible with the addition of ramps and railings or the removal of stairs and narrow passages.

Playgrounds provide opportunities for the development of skills which creates interest in new activities and endeavors; therefore, developing more strength physically, mentally, and emotionally.

The designers of a city playground in New York City felt that handicapped children could be motivated to walk if they had a place they wanted to walk to (Gordon, 1973). The designers then created a "mainstreamed" playground with increasingly difficult approaches and exits which are

accessible at different levels of mobility.

Playground designs have become very innovative in the past decade. The sterile atmosphere of the older play areas which had inaccessible equipment has forced the designers today to create an atmosphere which will foster both cognitive and affective growth. This can create a stimulating environment for all those involved.

Parks and public outdoor recreational areas may be made accessible by using the same designs and principles used in making buildings barrier free (Buch, 1979). Existing areas can be modified for accessibility by constructing ramps, paving trails, adding railings on trails, toilet facilities, and picnic areas.

Many city parks are programming activities to include the handicapped now. Programs should contain items requiring the use of all senses, especially touch, taste, and smell. Many parks are providing sensitivity sessions with visitors in order to educate them to nature and their environment (Vandervoort, 1977).

Planning makes a park non-exclusive when designed for the handicapped initially. Many new parks have "soft" concrete trails which make them more accessible by wheelchairs. They have special rest areas with benches of wheelchair areas for nature studies or just pure relaxation. Braille signs are now evident along with tape-recorded information stations on trails which aid the visually

impaired enjoy the activities to a much greater degree (Campbell, 1977).

There is a correlation between the built environment and the natural environment. The presence or lack of facilities in the natural environment can create barriers for the handicapped person. The absence of accessible restrooms is one barrier. This is often a large deterrent for the handicapped in natural settings. The entrance-ways, picnic areas, parking areas, lack of ramps all can contain barriers for the handicapped person.

Man-made trails which are too narrow can be inaccessible for a wheelchair. Railings or small ledges should be provided for protection, but it should not obstruct the view for the individual (Park, 1974). The surface of a trail can also become a barrier due to the surfacing texture that is used. Federal regulations on man-made improvements have given impetus for incorporating the needs of the physically handicapped into outdoor recreational facilities and programs, enabling many handicapped individuals to participate more actively (West, 1981).

Natural Environment

The natural environment provides for growth and development of the handicapped by nourishing exploration and constructive free play. With more accessible parks providing interesting trails and recreation spots, the handicapped can gain in cognitive and emotional growth while being integrated with non-handicapped peers.

The environment offers so many barriers that cannot be totally eliminated. Terrain can be too steep or too rugged for easy movement on crutches. Soft sanded areas, such as beaches, make an area nearly inaccessible for those on crutches or in wheelchairs (Trends, 1974). Grass can be a huge obstacle for the handicapped person if the ground is moist or sandy. It can also be slippery for a wheelchair. Other ground cover can have the same effect as grass, preventing or hindering the mobility of the handicapped person. Trees and their shedding foilage can be quite hazardous to the wheelchair occupant (Stone, 1971). The density of trees can also become a barrier for the handicapped person. If the growth is too thick, a wheelchair occupant cannot have access to that wooded area. The height of the growth is also important. The higher the foilage, the easier it will be for a wheelchair to enter the area. The root structure can act as a barrier for a wheelchair as it can prevent access to an area.

Ponds and lakes can be inaccessible to the fisherman or swimmer in a wheelchair due to the lack of proper ramps or moist ground surrounding that area. If the ground is muddy or too soft, the handicapped person will not be able to get close enough for fishing or swimming.

Ambient Environment

Our man-made environments are often deficient in the ambient qualities. This includes temperature, amount of

light, noise level, color, and texture (Compton, 1975).

Kahn (1975) suggested that a physical setting either supports or hinders goal-directed activity. Thus, the environment can act as a catalyst for supporting activity by being a well-designed, enriched place. A study of student behavior in an open classroom setting showed that changes in student behavior did occur when the physical setting was altered (Weinstein. 1977; Stephens, 1978).

Temperature is an important variable to the physical environment. Improper temperature adjustment can hinder the learning processes of the learner. The exact temperature recommended by the American Society of Heating, Refrigerating, and Air Conditioning Engineers is 71 degrees in summer and 68 degrees in winter (Griffit & Veitch, 1971; Goulette, 1980). The effects of temperature on people and their performance levels stress the importance of planning and providing for more conclusive conditions in the physical environment. Excessive temperatures have been attributed to more accidents, slower learning achievement, and more negative social interactions (Griffitt & Veitch, 1981). Studies suggest that a broad class of social-affective behaviors can be affected by environmental temperature and can have an affect on the psychological well-being of individuals (Griffitt & Veitch, 1971; Robbins, DeWalt, & Pelto, 1972).

Noise level is also important in the physical environment. Sounds not acceptable are considered to be noise,

or annoying sounds (D'Aprile, 1971). The amount of noise affects our attention and can be annoying, fatiguing, and frustrating, thus affecting cognitive and social interaction. A study by Zaks, Wolfe and Cameron (1969) found an association between exposure to large amount of sound and lessened health conditions. Even the background hum of heating and air conditioning units can be distracting to the occupants of that facility.

The handicapped person can be greatly affected by noise level. If there is a hearing deficiency, provisions have to be made to integrate that person into the mainstream of activities.

There are basically three categories of the effects of noise on people: damage to hearing which results from a high intensity sound, interference with speech communication when noise is above normal levels, and annoyance to high intensity sounds which can affect cognitive and affective functioning (D'Aprile, 1971).

The amount of light is crucial in the physical environment. It has been reported that well-lighted rooms have promoted better performance. The recommended system is indirect lighting which is reflected from the ceiling using high density reflectors (Goulette, 1971). This reduces the amount of glare on the occupants. Glare causes discomfort, interference with vision, and eye fatigue. Studies have shown that the number of windows and the

amount of natural light have a psychological impact on people (Karmel, 1965). People tend to feel more at ease and open when windows are available.

The visually impaired person can be greatly affected by the amount of light present in the environment. It is imperative that buildings have well-lighted rooms, hallways, and exits for the visually impaired person. These attributes allow the visually impaired person to function more independently.

Color has a significant psychological effect on the behavior of people. The right choice of wall, ceiling, and floor colors is essential for greater cognitive and social growth (Papadatos, 1973). There are many variables which determine the correct color schemes of a building or room. The dimension of the room and the type of natural and artificial light can be vital in choosing colors. Also, the furniture, which has been selected and the number of openings in the wall space, is an important variable. The use of the room is also important in determining the choice of color (Papadatos, 1973). Color can act as a visual focal point for areas such as drinking fountains, exits, and hallways.

A strong association has been found to exist between emotional tone and color use. Yellows, oranges, greens and blues were considered "happy" colors while reds, browns, and blacks were "sad" (Cimbalo, Beck & Sendziak, 1978). It might be suggested, then, to design a color scheme toward

a more positive area for occupants which could result in stimulating productivity, reducing absenteeism, and promoting more positive feelings of the occupants.

This could have a great impact on the handicapped population. Many institutions and day care facilities often use drab greens and beiges which provide no emotional stimulation at all. Facilities, especially a recreational type, could be colorful and attractive which would aid in promoting more positive participation from all those involved.

Visual perceptual skills have been identified as an important aspect in the educational development of children. Educators advocate direct teaching visual perception to young children, especially in the area of art. Those with handicapping conditions need special attention in the development of texture. This special population can have a greater difficulty with visual perceptions so greater care should be taken when teaching this area.

The ambient qualities can have a great effect on the handicapped population. They are indeed very essential in both the cognitive and affective domains. Therefore, the man-made environment should be a well-designed, enriching environment.

Socio-Communicative

Inadequate language skills and limitations in speech abilities constitutes a major deterrent to the social,

emotional, and vocational adjustment for children (Schiefelbusch, Copeland, & Smith, 1967). If the environment gives a child little reason to communicate, he may not actualize his potential to speak. This may be the greatest barrier toward the actualization of language skills to a child (Haviland, 1972). Robinson and Robinson (1977) found that in oral communication, the listerner's needs should be taken into account if communication is to be effective. Therefore, the child needs to be taught to become aware of the listerner and to adapt to those needs in order to have effective verbal communication. Semmel, Sitko, and Kreider (1973) found that "expansive" teachers in teaching verbal communication skills showed more gains than "restrictive" teachers. Thus, teacher influence plays a major role in acquiring communication skills. As a result, a barrier may exist if inadequate teaching methods are utilized.

Parental involvement is also considered a vital part in acquiring communication skills (Hetrick, 1979). With the involvement of the child's family, the additional instruction can be quite effective in the enhancing of the child in communication ability. This has been a large barrier in the past because parents were not always responsive in learning facilitative communication skills and in spending time in tutoring the child.

High noise levels were also cited as a barrier to proper speech communication (Haviland, 1972; Zabel, 1979). When

high noise levels are present, the child is required to speak in excess and can become annoyed, fatigued and irritable. Thus, speech communication can be limited or rejected completely as a result.

Expressive Language

The successful handling of social interactions depends partly upon an ability to perceive and interpret the motives and the intentions of others. Facial expressions play a major role in mediating verbal communication and is probably the most valuable source of information concerning emotion or affect (Ekman, Friesen, & Ellsworth, 1972).

Teaching children to recognize and identify types of emotions in facial expressions has been steadily increasing during the past decade. It plays a major role in the communication process. Odum and Lemond (1972) have found that the ability to recognize emotions in facial expressions tends to increase with the chronological age of children. Therefore, affective education should be an integral part of the curriculum for children. Teachers should teach emotion recognition so that the child is aware of his/her personal emotions as well as the feelings of others. With these skills, the child becomes a much better communicator.

Body Language

Knowledge and understanding body language is as equally important as understanding facial expressions. The dimension of warmth in the nonverbal behavior of a counselor has a

significant influence on the people with whom they interacted (Bayes, 1972; Sobelman, 1973). Teachers, parents, and counselors have a certain amount of influence upon children through the use of body language.

Eye contact is one of the more obvious of the nonverbal dimensions of communication (Brown & Parks, 1972). Eye contact is an indication of interpersonal intimacy between client and counselor. Studies have revealed that clients interact more readily when the counselor utilized a greater degree of eye contact.

Gestures are equally as important in nonverbal communication skills. Research has found that certain body movements can be associated with certain types of emotional reactions. Head and leg movements occur when anger is felt, leg movements are prevalent during times of depression, and lower body gestures are exhibited during times of intense emotions, and speech seems to be ineffectual (Sainsbure, 1955, Ditman, 1962, Ekman, 1965).

Educating a child to be aware of body gestures is necessary in order to achieve proper communication skills. With this knowledge, the child can be more aware of his/her personal emotions as well as the feelings of the person he/she is attempting to communicate with.

Proxemics (distance, touching, orientation) are yet another aspect of nonverbal communication. Distance between speakers is crucial in communication. If violated,

negative feelings can arise (Hall, 1959). Mehrabian (1968) found that closer distances tended to communicate a more positive attitude with a forward lean of the torso while backward leans and larger distances were more negative in nature. The child needs to become aware of culturally accepted distance as a communication skill. Teachers and other influential people should also be made aware of this aspect of body language in order to provide a more positive communicative environment for the child. Thus, the child is provided with a more comprehensive learning experience.

Temporal Environment

Studies have shown that there are disturbances in time-understanding of learning disordered children (Myklebust & Johnston, 1962; de Hirsch, 1963; Bryant, 1965). Little evidence is available to describe the nature of the disruption. Children with serious learning problems have less mastery of cognitive and perceptual aspects of time-understanding (Forer & Keogh, 1971). Therefore, problems with time-understanding may result in increased educational and social-behavioral problems for children with learning disorders.

The basic concept of time understanding is difficult for all children to master. Teachers and counselors must be able to develop new techniques in order to help the child perceive it correctly. The nature and extent of the

problems involved of time-understanding must be considered with each individual child. This can be a barrier as it takes time and energy to work on an individual basis.

Children are able to understand temporal cyclic order before they understand recurrance (Friedman, 1977). Temporal cyclic order is defined as seasons of the year, days of the week,and months of the year. Recurrance is defined as occurances which are ordered according to an asymmetrical relation-priority in time.

In addition, Friedman (1977) found that the use of concrete materials may allow a more adequate assessment of the time concepts of those children who are unable to construct verbal representation of the relationships between events. This should be a consideration of teachers and counselors when developing programs.

Another component of the temporal environment is space. This concept contains both the physical space and the personal space surrounding an individual. Personal space is defined as that area immediately surrounding an individual which he/she usually does not like to be penetrated (Dosey & Meisels, 1969). Personal space may function as a "protective screen" which minimizes the impact of threatening interpersonal transactions (Sanders, 1976; Edney & Uhlig, 1977). The level of threat is a critical determinant in the observed relationship.

In examining individual and small group territories, Edney and Uhlig (1977) found that persons feel a stronger ownership of the immediate environment when alone than when in a group. This suggests that individuals in a group might feel less responsibility for the maintenance and defense of a shared territory than would a sole occupant.

In a similar study, Taylor and Stough (1978) found that territorial cognition displayed primary and secondary territory role-structuring properties. Primary territories are private places where the owner has exclusive rights to use the space. Secondary territories are semi-public places where a person interacts with acquaintances and friends on a regular basis. Urban subjects were less likely to socialize with their neighbors in nearby outdoor spaces as were suburban subjects. This can be of importance when considering barriers in secondary territories.

Summary

There are several factors in the physical environment which become potential barriers in regards to the handicapped child. These factors include the built, natural, ambient, communicative, and temporal environments.

In order for the handicapped child to fully participate in leisure opportunities, park and recreation facilitators and personnel need to become cognizant of these potential barriers. Leisure enables the handicapped child to develop social and emotional skills and fortify his or her

own self worth. The removal of existing barriers will encourage the handicapped child to participate in many recreation activities (Xing, 1974).

The development of communication skills also facilitates the integration of the handicapped children with their non-handicapped peers. Adequate communication skills encourage the handicapped child to engage in activities with his peers. This process also supports the development of social and emotional skills.

Temporal factors include an understanding of time relationships, both linear and cyclical, as well as spatial conditions within the environment. These aspects are a critical part of a child's everyday life. A more positive environment can be created for the orthopedically impaired child with the reduction of present barriers.

Ambient environmental elements are noise levels, lighting, color, and temperature. Each of these elements contributes to a stimulating or boring environment. These elements work as a system to encourage activity within a specified boundary.

All of these factors of the physical environment affect the leisure behavior of the handicapped child. Removal of barriers provides the opportunity for growth in the cognitive, affective, and social domains. Recreational opportunites are as important to handicapped children as they are for others (Mace, 1980). Only now are many of the barriers being removed.

SECTION II

HUMAN ENVIRONMENT

Introduction

The human environment contains the areas of living arrangements, individual differences, and roles of individuals. Living arrangements will be discussed in terms of family living and institutional living. Individual differences includes educational, physical, and psychological differences. The roles individuals engage in are discussed as either assumed or ascribed.

There are numerous living arrangements existing in today's society. Family arrangements vary from communal living to the traditional formal family structures. Institutional living includes the traditional formal large facilities to the newer concepts of group homes and independent living arrangements. The roles of the individual are determined by society. An individual assumes a role such as therapist or is ascribed by role by social requirements.

This chapter will present an indepth discussion of the human environment as well as discuss the implications of human environmental barriers on the leisure functioning of orthopedically impaired children.

Living Arrangements

In today's society, there has evolved a multitude of living arrangements which can have an influence on the social, emotional and psychological development on entire families as well as the individuals within the families. These living arrangements are the result of societal adaptation to changing cultural norms and values (Cogswell, 1975; Marotz-Baden, Adams, Bueche, Munro, & Munro, 1979; Powell, 1979). The primary living arrangements which affect the life of a dependent child is his or her family (Lyon, 1975).

Family structure has been approached from traditional, ecological, and variant viewpoints. The traditional definition of a family has centered around the middle-class blue-collar family (Marotz-Baden, et.al., 1979). The traditional family concept has been described as "characterized by households of husband, wife, and children living apart from both sets of parents (grandparents) with the male as the breadwinner and the female as the homemaker" (Sussman, 1971, quoted in Cogswell, 1975, p. 392). This traditional view also characterizes the family as secluded loners, barricaded and protected from societal pressures and influences (Powell, 1979). The societal influences have cast the traditional family in the role of self-sufficient and independent organisms with little contact with the external world (Keniston, 1977).

This approach to the family cannot be generalized to minority groups or low income populations (Powell, 1979; Keefe, Padilla, & Carlos, 1979). Mexican-American families are typically large and multigenerational, extending both linearly and laterally including grandparents, aunts, uncles, and cousins (Keefe, et.al. 1979). For the low income black population, the concept of family includes personal friends and neighbors who provide primary emotional support (Powell, 1979). Finally, the traditional view of the family has been upheld by provisions of legal marriage. The husband is the head of the household and as such is responsible for the financial welfare of his family, and the wife is responsible for domestic service including maintenance of the home and child rearing (Cogswell, 1975).

The traditional view, while not being cast aside, has been classified as one of eight variations of family structure in American society. The remaining seven include: 1) dydadic nuclear, 2) single parent, 3) three generation, 4) old age couples, 5) institutional, 6) foster, and 7) kin networks (Marotz-Baden, et.al., 1979). In addition recognition was given to emerging experimental family structures such as communal, unmarried parent and unmarried couple with children (Marotz-Baden, et.al., 1979). Only two of these family structures would not have a direct effect on the development of a young child: old age couples, and institutional.

Another, perhaps more positive view of the family is the ecological approach. This view examines family structure from a systems viewpoint. The family is described as an open system whose exchanges with the environment reinforce family functioning and influence familial beliefs (Powell, 1979). The influences include emotional, and material support for family practices, and socialization of the family into environmental norms (Powell, 1979).

Most of these approaches to examining family structures include in their definition the presence of children. For many families, having children stems from societal norms and pressures. The child is embedded in the family system which in turn is embedded in society (Powell, 1979). The family is the most powerful source of support for the child in developing and enhancing his or her sense of self-worth and functional ability (Lyon, 1975). The child's behavior and development are directly influenced by parental interactions with society which encourages or discourages particular types of parent-child relationships (Powell, 1975).

The impact of a child on a family causes many adjustments to be made to accomodate a new member. These adjustments are compounded when a child with a handicap is born and becomes the responsibilities of unprepared parents. The family remains the primary support for the child, but additional support comes from outside the family in the areas of medical, educational, and social support.

The handicapped child forces a restructuring of the values and practices of a family in the areas of family management, transactions and development (Hersch, 1970). There are additional effects on marital interaction, and if there are non-handicapped siblings, there are effects on the interaction between them and their parents (Hersch, 1970). The siblings develop concerns about dealing with their parents, showing their feeling about their relationship with their parents, parental expectations of themselves and expectations of their relationship with the handicapped sibling (Murphy, 1978). The siblings also are forced to recognize the difficulties in developing and maintaining relationships outside the family in the area of friendships and social life (Murphy, 1980).

Institutional Arrangements

For many people, alternatives to family living arrangements are found in the service system of institutions. The concept of an institution can be broadly defined to include residential facilities, including the nuclear family, providing care for a group of people (Throne, 1979). This broad definition includes group homes, foster homes, and public institutions such as state mental hospitals and state schools for the mentally retarded. An institution as characterized by Wolfensberger (1971) is an environment that aims at a low common denominator among its residents, larger congregations of people than are found in communities,

a reduced autonomy and increased regimentation of residents, and tendency to be physically located under one roof or on a single campus.

Historically, institutions were developed to house the undesirable elements of society away from the mainstream of life (Thurman & Thiele, 1973). This housing process served two purposes: one, to protect certain elements of society, such as the retarded, physically handicapped, and mentally ill, from ridicule, injury, and humiliation at the hands of the public; and two, to protect the normal people of society from unpredictable behavioral outbursts by those undesirable elements (Wolfensberger, 1971a). As such, these institutions tended to be geographically and psychologically isolated away from surrounding communities (Rowland & Patterson, 1972).

Services at institutions for the retarded were traditionally developed following a medical model approach (Haviland, 1972; Thurman & Thiele, 1973; Throne, 1979). Programs were primarily medical, excluding psycho-behavioral strategies and ignoring all areas of human development (Wolfensberger, 1971b, Haviland, 1972, Thurman & Thiele, 1973).

The environment of an institution for the retarded is a reflection of the prevailing attitudes of the society at large and the staff of caregivers. The term 'retardation' many times invokes feelings of pity, sorrow, and fear in normal people towards the retarded (Wolfensberger, 1971a).

These feelings in turn generate actions of protection, comforting, providing for, and taking care of the retarded (Perske, 1972). As a result, very little expectation is placed upon residents to participate in their life and society (Rowland & Patterson, 1972). Typical moderately-to-profoundly retarded residents will spend a vast majority of their waking time never leaving their wards (Daily, Allen, Chinsky, & Veit, 1974). There are several documented consequences of institutionalized living. Public institutions begin to function as surrogate parent/authority figures (Rowland & Patterson, 1972). Institutions, without regard to the ability of involvement on the part of the resident, begin to handle all of the functions of living for the residents. Few options are left for residents in developing their skills (Perske, 1972). The measured intelligence of institutionalized residents decreases over a period of time (Thurman & Thiele, 1973). This phenomenon may be attributed to the lack of stimulation found in most public institutions (Haviland, 1972). The lack of stimulation stems from several areas. First, the removal of normal risks in life which are necessary for normal growth and development (Perske, 1972). Second, the absence of qualitative interactions between staff and clients (Blindert, 1974). Third, the lack of training provided for attendants and aides working with residents (Daily, et.al., 1974).

A recent trend to combat these trends in large public institutions has been the development of group homes and foster homes located within local communities (Throne, 1979). The group home is a highly specialized small family sized unit (Wolfensberger, 1971b). They are usually established to provide a transition residence for institutionalized persons who are moving back into the mainstream of society. These group homes allow clients to experience a greater degree of autonomy than they would experience in the institution (Meyer, 1973). A group home gives the retarded a sence of dignity, privacy and motivation for community involvement while expecting a higher degree of normalized behavior from the client (Wolfensberger, 1971b; Shapiro, 1973).

Individual Differences

Differences between children can be discussed in terms of a number of traits including physical, psychological, social, cognitive and cultural. In many service delivery systems, particularly education and rehabilitation, individual differences are important in designing and implementing treatment programs. An awareness of differences ensures that children and adults receive services based upon their needs instead of a set of global, generic needs.

At very early ages, differences can be detected in infants which are predictorsof motor competency and cognitive skills (Matheny & Brown, 1971; Collard, 1971). The development of

institutionalized infants depends upon the opportunities presented to them both motorically and perceptually (Collard, 1971). In a study comparing institutionalized infants with home-reared infants, the home-reared infants displayed a greater amount of development in social, imitative, and motor skills than the institutionalized infants (Collard, 1971). Further examination of the data showed that there was a distinct advantage in favor of higher-status home-reared children. These infants from higher status homes displayed a wider range of play schemas and performed better on tests than those from lower-status homes (Collard, 1981). Infants who displayed early signs of placidity, persistancy at tasks and a control of impulsiveness are more likely to have more adequate cognitive development than those infants without these characteristics (Matheny & Brown, 1971).

As young children grow they become aware of several differences in themselves and others. Young children become aware of physical differences in other children and begin to select friends on the physical characteristics of others (Lerner & Korn, 1972; Kleck, Richardson & Ronald, 1974). Distinctive physical characteristics of children are reliably related to social acceptance. Using pictures ofindividuals as a stimulus to social preference, Kleck, et.al., 1974, said that, "such overt characteristics as obesity and physical handicap are associated with a relatively low level of social acceptance." In a follow up study in a summer camp for boys,

it was found that the visibly handicapped boys were least preferred as playmates and members of a group (Richardson, Ronald & Kleck, 1974). Additionally, Richardson et.al., noted that behavior of the visibly handicapped peers as well as physical characteristics were important in peer evaluation (1974). For non-handicapped people, the type of body build stereotype can have an influence on both the social selection process and psychic of the individual(Lerner & Korn, 1972). Factors that affect the preferences of body build stereotypes include the age and self-concept of the individual. Using three age groups of subjects, classified as chubby and average body build, Lerner and Korn (1972) found that across all age groups, the chubby subjects viewed themselves as more characteristic of average and slim body build stereotypes. Additionally, both chubby and average subjects viewed the endomorph body type as unfavorable and the mesomorph body type as favorable (Lerner & Korn, 1972).

In the educational and social arena, additional factors begin to accentuate individual differences. Lower-class and culturally different children tend to fare less well than middle- and upper-class children(Benowitz & Rosenfield, 1972; Feldman, 1973). Mexican-American children from home environments where traditional Mexican values are emphasized perform significantly lower on tests of field dependence (Figuero & Gallegos, 1978). Students from low income families tend to function on a lower conceptual level than middle-class children (Levine, 1971).

Performance in the classroom is a function of the capabilities, interests, and motivation of the child. The type of external rewards used to motivate children has varying degrees of success with different levels of children. Material rewards were found to have more affect on the learning of lower-class children than the traditional social rewards and incentives (Benowitz & Rosenfield, 1972).

Within the social system, children begin to encounter the element of competition. It is an understood phenomenon that occurs whenever individuals or groups need play as an important part in coping with society. The elements of competition begin to emerge in children as early as 4½ years (Toda, Shinotsuka, McClintock, and Steck, 1978). As children grow older, the number of competitive choices made increases (Toda, et.al., 1978). Clenenyer (1974) comparing the competitive behavior of children from different levels of income, found that lower-income children display more competitive behavior between them than the middle-class children. This could be attributed to the environment in which lower-income children live, one of survival and supremacy on the streets (Figueroa & Gallegos, 1978).

Roles of Individuals

There are a number of roles that both children and adults are placed in on the basis of societal expectations. At any one time a child may be placed in the role of student, friend, peer, role model, son, daughter, and so on. These roles are

dependent upon and a function of the situation in which the child is placed. Role-taking ability has been associated with the capacity of an individual to coordinate his or her behavior sequences as well as the behavior sequences of others (Afflect, 1975; Fifer, 1980). Additionally, role-taking ability involves the making of accurate assessments of others' intentions and the appraisal of the effect of one's behavior (Affleck, 1976).

The goal of social role-taking is perhaps inextricably linked to interpersonal competence and the ability to accomplish interpersonal tasks. The growth of interpersonal competence is directly associated with role-taking ability (Weinstein, 1969). In a study designed to measure the role-taking of mentally retarded children, Affleck (1975) found a significant relationship between the ability to assume a social role and mental age and intelligence quotient. It was also determined that no signficiant relationship was found between social role-taking ability and sex (Affleck, 1975; Afflect, 1976). Further study by Affleck (1976) found that the tactics preferred by children with role-taking ability differed from both in intensity and quality (Kilman, Albert, Sotile, 1975).

Perhaps the most joyous occasion for families is the arrival of a newborn infant. This arrival causes a dramatic change in the structure of the family as well as altering the roles of each individual within the family unit

(Murphy, 1970; Fotheringham and Creal, 1974; Anderson, Schlothman & Weinger, 1975). The parent assumes the role of primary care-giver, nuturer, protector, provider, and a host of other roles related to a family. When a handicapped child is born into a family, the role of the parent drastically changes (Meadow & Meadow, 1970: Murphy, 1970; Hersch, 1970). These families face problems on a day-to-day basis ranging from day care to social pressures (Dunlap & Hollinsworth, 1977).

The role of the parent of a handicapped child expands to include teaching tasks and providing emotional support as the child matures and develops (Meadow & Meadow, 1970). An example of a teaching role for the parent would be learning ways to help their child learn motor skills. When a parent assumes the role of emotional support, he or she is helping the child deal with feelings of guilt, sorrow, anger, as well as success and happiness (Meadow & Meadow, 1970; Murphy, 1974; Hersch, 1980).

Adults who are not members of the immediate family or are not a member of the family's social environment assume roles from educator, counselor, psychologist, to therapist or doctor. The school serves as a principal influence in a child's life from about the age of six years to approximately sixteen (Cowen & Lorion, 1975; Pogebin & Retish, 1976). The role of the school system is to influence a child's personal and educational growth (Cown & Lorion, 1976). This role has

been assumed by the education system through a systematic process of default. Society has placed an increasing responsibility on the school system to not only educate their children in the three R's, but also in government, societal responsibility, and to some, patriotism. Whenever there arises problems in society, one of the first areas often singled out as responsible is the school system (Pogrebin & Retish, 1976). The importance of the educational systems role cannot be lessened even though the system is the focus of possibly unwarranted criticism.

In an attempt to redefine the role of the school mental health professional, a Primary Mental Health Program (PMHP) was developed in the city school system of New York. School mental health services had been traditionally defined as identifying and repairing individually dysfunctioning children (Cowen, 1973; Cowen & Larion, 1976). As a result, school mental health services were largely pathology directed and focused on the problem oriented few rather than on the system serving these few. The professional then was primarily engaged in diagnostic or remedial work with children. The PMHP professionals spend most of their time in upgrading the knowledge and skills of those who have educative contact with children (Cowen, Lorion, Kraus & Dorr, 1974; Cowen and Lorion, 1976). The role of the school mental health professional can be described as a proactive, health-oriented delivery system, directed towards the majortiy of students (Gottlieb & Gottlieb, 1971).

Doctors and therapists assume supportive functions or roles when dealing with parents and children. Many times, physicians act in isolation without regard to the input of others in the care and diagnosis of children. There is a growing awareness among physicians that their role not only includes evaluation of the body's various systems which affect a child's progress when dysfunctioning (Holman, 1972). There exists between a general practitioner, parent and teacher, a system of mutual cooperation which enhances the growth and development of child (Holman, 1972; Meadows & Meadows, 1976).

Therapists play an important role in the life of a child. The type of relationship established between them can influence the degree of benefit from the interaction. The primary method in which a client relates to the external world can influence how the therapists deal with clients (Kerr, 1970; Kilman, Albert, Sotile, 1975). A therapist's role can be defined as structured or unstructured (Kilman, et.al., 1975). In their study, Kilman, et.al., found significant differences in therapists structure and locus of control of internal and external clients (1975). External subjects displayed a greater shift in behavior than internal subjects in a structured setting. Conversely, internal subjects demonstrated a greater shift in behavior than external subjects in unstructured situations (Kilman, et.al., 1975). This would appear to indicate that internal subjects are

more resistant to structured settings while external subjects are more resistant to unstructured situations.

Regardless of the role of the adult or child, attitudes and beliefs of the service provider can affect the role of the recipient (Kerr, 1970). Because of the disability, handicapped individuals are frequently placed in an inferior position (Richardson, et.al., 1974; Matthews, 1980). As a result, the disabled person may have further difficulties in adjusting to the role of being a handicapped or disabled individual (Sitter, 1969). It is the role of physicians, parents, therapists and educators to assist the disabled, handicapped, and the non-handicapped in adjusting to the demands of society (Holman, 1972; Kilman et.al., 1975; Kerr, 1980; Meadow and Meadow, 1980).

Implications for The Orthopedically Impaired

Both family and institutionalized living arrangements have possible effects on handicapped children in today's society. As a primary environment, both living arrangements provide the basis for learning behavior to be practiced in society (Paton, 1970). Children from families where emotional closeness is an integral component of family life tend to find experiences outside the home rich, exciting, and challenging (Paton, 1970). Handicapped children from similar home environments will have a better chance of coping in society outside the home. If a family environment displays a fragmented, disoriented approach of coping, children will

experience a higher level of anxiety and negative attitudes than the children from other homes (Paton, 1970). The social behaviors of disturbed children are influenced greatly by the environment and at times will display a particular type of behavior with one type of setting or another (Price, 1975).

Institutional living can have an affect on all aspects of human development. As with family living, there is a specific type of behavior, which over a period of time, is associated with institutional living (Wolfensberger, 1971a). The amount of interaction between staff members and clients provides a basis of modeling socially appropriate behaviors. However, because a handicapping condition is physically manifested, attendants' reduced expectation encourages clients to remain dependent instead of developing independence. A large amount of risk is removed from the lives of handicapped individuals to prevent them from experiencing psychological or physical injury (Perske, 1972).

The impact of having a visible handicap can negatively influence the non-handicapped child when interacting with the handicapped child (Richardson, et.al., 1974). Disabled children not only need to have interaction with non-handicapped peers, they also need the opportunities to develop their leisure skills in the presence of their non-handicapped peers (Evans, 1975).

The recreation professional would need to provide recreation opportunities in which the stereotype of the handicapped child can be discarded. These opportunities would meet the needs of the handicapped child in a less

stressful environment (King, 1970).

The lack of physical mobility would require the recreator to include the handicapped child in activities in which the lack of mobility would not be accentuated. The recreator would need to be especially aware of excluding the handicapped child from such activities as relay races, circle games, and the like because of the handicapped child being in a wheelchair. Adaption of activities that would facilitate inclusion of the handicapped child would be the practice instead of the exception. The individual differences in handicapped children can be used to broaden the scope and depth of leisure activities and are a resource not to be wasted.

The orthopedically impaired child is also forced into many different roles. He or she is referred to as a student, client, patient, or subject in a research experiment. As a student, the orthopedically impaired child may be enrolled in a special classroom designed to meet his or her needs in school. This segregation often times serves to increase the differentness of the child (Kerr, 1970). The ability of the child to assume the various roles required by the variety of settings will be affected by those around him or her and their ability to perceive the child as a capable individual. The orthopedically impaired child will be able to do as much or as little as he or she is able based upon the knowledge and expectations of those around him or her (Kerr, 1970; Afflect, 1975; Afflect, 1976).

The therapist, physician, or educator have a direct influence on the attitude of the orthopedically impaired child concerning his or her capabilities. Through a process of education, therapy, and in some cases preventative medicine, an orthopedically impaired child will be able to overcome many of the limitations imposed on him by a protective and comforting environment (Perske, 1970; Kerr, 1970)

Summary

In order for the orthopedically impaired to participate fully in recreation experiences, it is necessary to determine the extent of family or institutional involvement in their lives. Families with strong beliefs regarding the development of a child's independence, recognizing the extent of limitations possibly imposed by an orthopedic impairment, will facilitate the development of their child in all areas of human potential. Families unable to deal with the reality of caring for an orthopedically impaired child will tend to restrict the development of the child, emotionally, physically, and psychologically.

Similarily, the prevailing attitudes of an institution will either foster or inhibit the expansion of recreation experiences for their residents. Allowing for 'normal' risks to be taken by orthopedicly impaired children provides the opportunity to discover new talents and skills that otherwise would not have been discovered.

Individual differences manifest themselves in a variety of areas. External influences such as lower-income level, institutionalized living, and culture differences, influence how children acquire academic, social, and affective skills. Choices of playmates and companions are initially made or the basis of physical appearance and body-build type. However after prolonged contact these differences become less of a factor as the behavior or others gains importance in the selection of companions. The professional recreator needs to examine the extent of differences in cognitive, social, physical and affective abilities and programs such that the differences are minimized,and the abilities are maximized.

There are several roles for adults and the orthopedically impaired child to assume during interaction with each other. The role of the adults include parent, physician, educator, therapist, and diagnostician. Each of these roles has a responsibility in meeting the needs of the orthopedically impaired child. Parents assist the child in learning new skills and coping with the emotions of being different (Meadow & Meadow, 1980). The physician is responsible for helping the child maintain as healthy a body as possible, physically, psychologically,and medically (Holman, 1972). The educator helps the child identify the environment around him or her and to discover ways of overcoming certain limitations to his or her development. The therapist has a very similar role, be they physical, speech, occupational, or

psychological therapists.

The orthopedically impaired child assumes a variety of roles primarily because of the special needs associated with his or her disability. In each role, a different interaction style is required. In some cases, the child may be a passive recipient while, in others, the child may be a cooperative, active partner.

For all the adults involved with a child it is important that they:

> Think of no child as dull or subnormal, do not set a limit on the child's ability. The truth is that the possibilities of the human mind and body are boundless and if limits exist, one should never think of them. (Fitzgerald, 1954, quoted in Dixon, 1972, p. 231).

SECTION III

ORGANIZATIONAL/POLITICAL ENVIRONMENT

Introduction

The organizational/political environment is comprised of the following areas; service delivery systems, policies and regulations, and economic status. Service delivery systems include the educational, health, and the leisure service systems. Policies and regulations include those formulated at local, state, and federal levels. It also includes policies and regulations used and enforced in service agencies. Economic status refers to the level of income produced by a family. It also refers to poverty levels and the various definitions used in its description.

Service Delivery Systems

There are a number of service delivery systems designed to meet the needs of members of society. It can be postulated that with the proliferation of specialized service providers within both the commercial, and public sectors, that society has become service oriented. The public sector has witnessed a rapid increase in the number and diversity of social services since the beginning of the Johnson administration (Crompton & Howard, 1980). The social service systems include education, public health, and leisure facilities.

A primary public service delivery system encountered by members of society is the educational system. Since the passage of the mandatory education laws in the early part of the twentieth century, public education has been the first encounter with social institutions for a vast majority of the American population (Rosenthal & Jacobson, 1966; Boaz, 1971; Retish, 1973). Traditionally, the educational system has been given the responsibility to develop sound moral, academic ability, and motivation for upward economic mobility (Pogrebin & Retish, 1976). Cohen (1966) states:

> The school system represents the major American value system, which stresses verbal fluency, academic intelligence, high levels of aspiration, drive for achievement, capacity of attainment of long range goals, the ability to postpone gratification, cleanliness, neatness, and respect for the importance of manners.

It is in the school system that the child first encounters the beliefs of others. Individual differences, academic, social, physical, cultural and moral, have a direct influence on the child's acceptance by peers and teachers (Pogrebin & Retish, 1976). The education system provides children from lower-income families with the means to achieving more in society and avoiding the stigma of poverty (Pogrebin & Retish, 1976).

The health services field has also become of primary importance to post-industrial societies. With the tremendous advances made within the medical field, societies are expecting better health care and longer life spans (Fry, 1973).

Health needs can be defined as "the inherent human requirements that must be met in order for an individual to experience a sense of physical, psychological, and social well-being" (Mosey, 1973). There are a number of professions that comprise the health service system. Chiefly among these are medical doctors and therapists. There are several types of medical doctors but for the most part, they can be classified as general specialists, super-specialists, and national specialists (Fry, 1973). In the United States, medical care has not become socialized and, as such, the availability and accessibility of quality health care depends upon locality, income, and social status (Fry, 1973). To fill the gap in quality medical services, many communities have public hospitals, public health agencies, and neighborhood clinics. For those unable to afford medical care, the cost is born by the local taxpayers. Additionally for elderly people and dependents of disabled people, the federal government makes available Medicare and Medicaide. Despite the inherent problems with these systems, they are an attempt to meet the needs of a highly technical nation.

Therapists include occupational, physical, speech, and psychological. The therapists function in either a reactive (treatment), or proactive (preventative) environment (King, 1970; Mosey, 1973). In a treatment setting, a therapist is concerned with bringing about a pre-determined change in their clients' repertoire of behaviors (Mosey, 1973). The characteristics of a treatment setting

include an orientation to correcting physical or psychosocial pathology, the enhancement of learning skills, prescribing treatment for a period of time, and rehabilitating the client into society (Evans, 1975; Prial, 1976). A preventative environment is characterized by working on growth of the client at his or her own pace, assistance in dealing with current physical or psychological dysfunction, and an orientation to the present (Mosey, 1973). In a proactive role, the therapist would attempt to directly satisfy health needs, work as a member of a team of professionals and act as an educator and advocate within the community (Mosey, 1973; Fry, 1973; Prial, 1976).

Leisure Service Delivery Systems

In the field of recreation, the leisure needs of society are met in a variety of ways. The public parks and recreation agencies for the most part serve the needs of the healthy, non-disabled member of a community. Programs are planned according to a number of factors such as demand, cost, availability or facilities and many times, the time of the year (Crompton & Howard, 1980). For those individuals who are not receiving recreation and leisure services because of a handicap or disability, their needs are met by therapeutic recreators. The attitude of recreators plays an important role in designing and implementing services for the disabled (King, 1970). There are three roles commonly ascribed to a therapeutic recreator: therapist, educator/facilitator, and recreater/advocate (Gunn & Peterson, 1977; Compton & Witt, 1979).

The disabled or handicapped person has many more barriers to overcome than his or her non-handicapped peers. These include architectural, financial, transportation,and health (King, 1970). With the passage of the Vocational Rehabilitation Act of 1973, specifically Section 504, architectural barrires are becoming less of a hindrance, but they have yet to be entirely eliminated. Being handicapped does not necessarily mean having to live in a totally financially dependent state. However, because of a handicap, certain costs do increase because of a need for specialized equipment as means of transportation. Finding a job which can be accomplished successfully by a handicapped person is difficult (King, 1970; Prial, 1976).

Policies and Regulations

The social service agencies operating within the American society do so with the approval of federal, state and local governments. The practice of regulation serves to protect both the consumer of services and the provider of services from negligence. There are regulations and policies which affect the educational system, state school systems, medical systems,and rehabilitation services.

The federal government regulates educational services, through the passage of laws and acts designed to safeguard the educational rights of children. Recent acts include the Elementary and Secondary School Act of 1965 (ESEA)

and the Education of All Handicapped Children Act of 1973 (P.L. 94-142). The most important tile of the ESEA is Title I (Murphy, 1977). The ESEA was reform-oriented and as such attempted to stimulate innovation, strengthen the state's powers, link research with schools, and make the problem of the poor the number one education priority (Murphy, 1977). The act provides controls for each level of government. While the federal government controlled the allotment of funds and adherence to criteria, the local governments had the authority of approval of projects requesting federal assistance.

The Education of All Handicapped Children's Act (P.L. 94-142) sought to expand the consciousness of education to include all handicapped children. The thrust of this law was to mandate public schools to provide educational service to handicapped children in the "least restrict environment". P.L. 94-142 outlined the scope of services to be provided, the procedure used for applying for funds, the rights of the parents and child, and an appeals process if parents felt that their child was not receiving appropriate services.

Similarily, in the rehabilitation field, a significant piece of legislation was passed with the enactment of the Rehabilitation Act of 1973 (P.L. 94-112). In addition to requiring individual rehabilitation plans written for each client, it also contained the important stipulation in Section 504 of equal access to buildings and facilities for

all handicapped individuals (Lavor & Duncan, 1976). The aims of rehabilitation services include: medical aid, vocational rehabilitation of the disabled, placement of clients into remunerative employment, placing clients in a position of free mobility, and enrichment in the community and achievement of the general right of pursuit of happiness (Greer, Jenkins & Flint, 1975).

Policies and regulations relating to the care of institutionalized individuals are formulated and regulated by the Accreditation Council for Facilitities for Mentally Retarded (ACFMR) (Crosby, 1973). Accreditation seems to have two major purposes: setting appropriate levels of service and determining compliance to established standards (Crosby, 1973). There were a number of standards established by the ACFMR to measure educational services. These standards include: equal access to educational services by all residents, the use of individualized education plans, the use of appropriate programs, sufficient availability of qualified personnel and staff, for development of the teaching staff (Crosby, 1973). Similar standards can be found in the 1973 Joint Commission for the Accreditation of Hospitals, Manual for Standards for Community Agencies.

The recreation agency in many communities has a regulatory body that has been mandated by local law (Bannon, 1973). In many park and recreation agencies the relationship between a park board and the director is one of mutual cooperation. The

board represents the public goals and values and determines, to some extent, the scope of recreation programs (Bannon, 1973).

The task of the director, being a practitioner, is to assume all responsibilities for policies designated and to apply these policies in the most effective manner.

Economic Status

There is a growing awareness that in this country there are a substantial number of people who exist in one form or another at or below the so-called poverty level. During the early 1960's and continuing through the present, the existence of substantial poverty has been a public policy (Newton, 1977). The public concern for the social condition has been dealt with primarily in the government sector through the creation of legislation promoting services for these people who are categorized by one definition. The same situation plagues the issue of poverty. Depending on the perspective of the researcher of social agency, poverty has been defined as being below a specified level of income, the lower end of the economic scale, such as the lower 10-20%, and as a subjective feeling of the individual regarding the inadequacies of the resource available (Bouma, 1976).

The most commonly used definition of poverty refers to a specific income level of which an individual or family does not exceed, means that an individual or family is living in poverty (Bouma, 1976; Garfinkel & Haveman, 1976). The

significance of this definition lies in the fact that it is the one used by the federal government in its allocation of resources (money) for governmentally-supported programs (Bouma, 1976). The Bureau of Labor Statistics each year develops a mock budget for low, median and high income brackets. This budget is geared towards a low-income family of four and is estimated for families living in rental housing without air conditioning, performing more services for itself, and utilizing free recreation facilities within the community (Cobas, 1978).

A second definition stresses the point of relative income deprivation. Those people having incomes at the lower end of the economic scale would be considered poor and in the poverty zone (Bouma, 1976). This figure would be comprised of individuals who may not be classified as being within the poverty range according to the previous definition. The lower 10-20%, regardless of how much an individual's income was, would be considered as living in the poverty zone (Bouma, 1976). This figure would be comprised of individuals who may not be classified as being within poverty range according to the previous definition. The lower 10-20%, regardless of how much an individual's income was, would be considered as living in poverty. Theoretically a person making $5,000 a year could be at the lower end of the economic spectrum.

A third definition deals with the individuals perspective of his economic situtation. If the individual feels he or she

has an inability to reconcile their wants and needs with what they have, that individual may consider himself or herself to be living in poverty (Bouma, 1976). This definition uses the psychology of the individual in determining the poverty level. Using this definition, many people who need very little and want very little would not be considered as poverty stricken simply because that individual has reconciled his or her wants with what he or she has.

Finally, another definition uses the earning capacity of individuals to determine the poverty level. Earnings capacity is defined as "the ability of a living unit to generate its physical and human capital at capacity" (Garfinkel & Haveman, 1976). The important concept in this definition is capacity. It is implied that a family has a maximum earning capacity which can be measured. At a specified level below the maximum earnings capacity, a family would fall into the poverty category. The impact of using the relative income deprivation, subjective individual perception, or earnings capacity definition for defining poverty would be to increase the number of people living in poverty and therefore eligible for federal assistance (Bouma, 1976; Garfinkel & Haveman, 1976; Newton, 1977).

It has been suggested that there are very different values and goals for lower-class people. During a year-long field study with families defined as living in poverty, Newton (1977) found that poor people do perceive and act in accordance with marginal costs and returns. They make the

most of what they have. Their behavior is a function of distinctly different goals, and they behave rationally in their best interests (Newton, 1977).

Implications for Leisure

Regulation by federal government has not yet penetrated the field of parks and recreation in the programming area. However, on other levels, there are several applicable laws which affect recreation areas. First, if a facility is applying for federal funds, that facility must comply with such regulations as Affirmative Action, Equal Opportunity Employment Commission, and Section 504 of P.L. 93-112. The regulations affect the hiring, training, and promotion of handicapped individuals as well as making public facilities accessible to the handicapped and disabled.

The Education for All Handicapped Children's Act (P.L. 940142) outlines under ancillary services the provision of leisure education services to special education children. This will provide the recreation profession with an opportunity to develop a service system which can function within the education system. An early familiarization with the leisure service field will provide the handicapped child with a wider range of available services as he or she grows up.

Regardless of the definition of poverty one chooses to adopt, the effect on leisure will largely be the same. As pointed out earlier, three of the four definitions would

dramatically increase the number of people existing below the poverty line. Only the lower-lower class individuals would remain eligible for federal assistance, leaving the remainder to assume second jobs to maintain their standard of living.

The leisure of this class of people would be affected primarily by a lack of unobligated time, free from the chores necessary to maintain their families. The use of free public recreation facilities would be a major source of recreation activities (Cobas, 1978). In addition, leisure time would be spent helping care for the home, family, and friends through the activities such as shopping, canning, and growing gardens (Newton, 1978).

Implications for the Handicapped

For the handicapped, the various service delivery systems are forced to choose a means of meeting their needs without creating a feeling of dependency on the part of the disabled and avoid causing further stigmatizing and classifying on the part of the non-handicapped individuals in society (Boyd & Hartnett, 1974; Evans, 1975). Good medical care is a function of society's attitude, medical schools' attitude, and the attitude of the disabled (Fry, 1973). The responsibility of meeting the health needs of the disabled and handicapped arises from the patient, the health care facility, and the community environment (Mosey, 1973). In a comprehensive

recreation service system, handicapped individuals would be able to choose from a variety of leisure activities that would include non-handicapped individuals (Boyd & Hartnet, 1974; Lord & Hutchinson, 1979). In addition, recreation services would provide a continuum of services for all ages of individuals and include specialists from not only recreation but physical education, art and dance as well as other specific activity areas (Boyd & Hartnett, 1974).

The education system has already begun to meet the needs of the disabled. Their services range from preschool years through age 18, in some states from birth through 25. Special education public schools traditionally focuses on correcting or minimizing the consequences of the handicapped. Special education teachers focus on developing appropriate social, cognitive, and motor skills necessary to function in the education system as well as in society at large (Gotts, 1975).

The passage of laws such as P.L. 94-142 and P.L. 94-112 Section 504, signal the change of service delivery systems. The handicapped not only are demanding equal opportunities in practically every area of life, they are insisting on the development of recreation programs that allow them to develop what abilities they have (King, 1970). Recreation programs in the inner city as well as in the suburban areas will be forced into designing and implementing programs that handicapped people can participate in without being isolated.

Facilities will be required to have modifications which will ensure easy access by handicapped individuals in wheelchairs or using other forms of ambulatory assistance.

Additional implications will have handicapped-teamed professionals as part of the service delivery team. Members of the community who have a disability or handicap will be included in the planning process of community agencies. The handicapped will become a contributor to the development of leisure services as well as a consumer of these services.

Economic status has a direct affect on the availability of a wide range of services for the handicapped. The cost of prosthetic devices such as crutches, wheelchairs, walkers, and artificial limbs make their accessibility to the handicapped limited (King, 1970). Many handicapped individuals who lack transportation have to rely on friends or public transportation such as taxis, buses, or trains. If these means of transportation do not provide direct travel to and from leisure activities, the handicapped individual is likely to remain at home (King, 1970).

For a handicapped child, the problem of recreation and leisure is compounded, especially if the child resides within an inner-city neighborhood. Recreation, particularly therapeutic recreation, is almost non-existent in inner city recreation facilities (Evans, 1975). The principal reason is that the directors of these centers are so unfamiliar with special populations, that they do not offer any programs

for handicapped children (Evans, 1975).

An additional implication is that once recreation programs are made available to the handicapped child, there may be no means of transportation available because of the cost involved. Lower-income families rarely if ever have discretionary income to use for unnecessary items as bus or taxi fare (King, 1970).

Summary

The handicapped individual is forced to deal with many service systems in order to meet his or her needs. As a young child the disabled child is confronted with adapting to a world which requires a variety of skills. The special education classroom provides the first service system which begins to assist the child in acquiring, developing and mastering these skills. During the child's educational career in public schools, additional help may be provided in the areas of speech therapy, physical therapy, and occuaptional therapy. The type and intensity of ancillary therapeutic services required are based upon the level of the child's ability and the type of environment in which the services are required (Mosey, 1973).

Recreation services for the disabled also depend upon the abilities of the client and the type of setting the client is living in (Gunn & Peterson, 1977). The role of the leisure service delivery system is to provide the disabled

with opportunities to develop interests and abilities which will help them overcome boredom, a lack of stimulation, and discourage isolation from the community (King, 1970). King (1970) states the rights of the handicapped quite succinctly:

> A disabled person has the same human needs as a nondisabled person and therefore should have an opportunity to make the best possible use of whatever abilities he has and should have the chance to offer these abilities to the rest of his or her non-disabled peers (p.20).

The majority of legislation passed involved the concentrated efforts of effective lobbying groups. The handicapped and disabled have effectively worked with the concerned organizations to pass laws which guarantee their rights in basic human services such as education, rehabilitation, and recreation. The federal government will have to continue to use their influence to encourage the development and expansion of leisure services for the handicapped.

There are four definitions of poverty used by various agencies in the social service field. The federal government uses a definition based on a lack of income to determine the poverty level. Those individuals falling below the poverty line are eligible for a wide variety of income supplements ranging from food stamps to rent subsidies. Three other definitions; relative income deprivation, subjective perception of the individual, and earnings capacity, would all increase the number of people considered as poverty stricken. Those individuals who are considered to be poverty stricken would experience a lack of free time in which to have leisure because they are forced to work longer hours, more jobs, and at

lower wages to meet their basic needs. Children who have an orthopedic impairment and have parents who are living below the poverty level have additional limitations because of the cost of prosthetic devices may be beyond the means of their families. These children have to rely on the resources of their families to provide adequate leisure activities for them.

> Handicapped youngsters have the same need to express themselves freely in wholesome, non-threatening environments as their non-handicapped peers. (Evans, 1975).

In order for these children to have the opportunity to express themselves, the environmental barriers must be assessed and ameliorated by concerned practitioners in the allied health field.

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PRELIMINARY ADMINISTRATION OF AEBLE INSTRUMENT

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This project was supported in part by Grant No. G008005886 from the Office of Special Education, U.S. Department of Education. The opinions expressed herein do not necessarily reflect the opinion of the Office of Special Education or North Texas State University and no official endorsement should be inferred.

Introduction

The AEBLE instrument was administered to eighteen orthopedically impaired children in the City of Ft. Worth, Texas. Included in this sample were thirteen males and nine females. The disabilities represented included muscular dystrophy (6), cerebral palsy (5), spinal cord injury (2), spina bifida (2), asteogenesis imperfecta, rod myopathy and one unidentified disability.

The AEBLE instrument is composed of six factors, each measuring a specific type of environmental barrier. The six factors are: 1) Community Recreation Resource, 2) Architectural Barriers, 3) Accessible and Available Transporation, 4) Family Support, 5) Community Support Services, and 6) Caregiver Support. Each factor has five statements which attempt to measure various aspects of the environment. Each questions is rated as: usually a problem (3), something of a problem (2) or not a problem (1). The highest score possible on any factor is 15 and the lowest possible score is 5. The range of scores were divided into three categories: a significant problem was 12-15, somewhat of a problem was 8-11, and not a problem was 5-7.

Results

The preliminary data reveals that Factor 5 was considered a significant problem for 12 of the 18 subjects, Factor 1 was considered a significant problem for 10 of the 18 subjects, and Factor 2 was considered a significant problem for 8 of the 18 subjects.

Factors 2 and 3 were considered somewhat of a problem for 9 of the 18 subjects. Factors 5 and 6 were considered somewhat of a problem for 6 of the eighteen subjects.

Factor 4 was consistently rated as not a problem. Only one subject rated this factor as somewhat of a problem. Eight of the subjects rated

Factor 6 as not a problem and seven rated Factor 3 as not a problem.

Factor Results (NOTE: see Appendix for tables)

Factor 1. Community Recreation Resources

The overall scores for Factor 1 ranged from 6 to 14. The mean score was 10.66 with a standard deviation of 2.54.

Statement number 1 had a mean score of 2.33 with the mode being 3. Statement number 2 had a mean of 2.22 also with a mode of 3. Statement number 3 had a mean of 2.0 and was bimodal with 3 and 1 being the most frequent scores. Statement number 4 had a mean of 2.61 and also had a mode of 3. Statement number 5 had a mean of 1.50 with a mode of 1.

Factor 2. Architectural Barriers

The scores for Factor 2 ranged from 7 to 18. The mean score was 11.05 with a standard deviation of 2.60.

Statement number 1 had a mean score of 2.33 with a mode of 3. Statement number 2 had a mean score of 2.77 with a mode of 3. Statement number 3 had a mean score of 1.72 with a mode of 1. Statement number 4 had a mean of 2.0 with all scores occurring the same number of times. Statement number 5 had a mean of 2.27 and also had a mode of 3.

Factor 3. Accessible and Available Transportation

The range of scores for Factor 3 went from 5 to 15 with a mean of 8.77 and a standard deviation of 2.67.

Statement number one had a mean score of 2.5 and a mode of 3. Statements 2 through 5 were rated relatively low with mean scores of 1.66, 1.88, 1.33, and 1.38 respectively. All four statements had a mode of 1.

Factor 4. Family Support

The scores for Factor 4 ranged from 5 to 11 with a mean score of 6.27 and a standard deviation of 1.36. All five statements had modes of 1. The mean scores respectively were 1.27, 1.77, 1.44, 1.0, and 1.05.

Factor 5. Community Support Services

The scores for Factor 5 ranged from 9 to 15, with a mean of 12.50 and a standard deviation of 1.85. All five statements had a mode of 3.0 and the mean scores were 2.38, 2.77, 2.61, 2.33, and 2.38 respectively.

Factor 6. Caregiver Support

The scores for Factor 6 ranged from 5 to 12 with a mean score of 8.0 and a standard deviation of 2.40. Statement number 1 had a mean score of 2.0 and a mode of 2. Statements 2 through 5 had mean scores of 1.05, 1.38, 1.77, and 1.77. All four statements had a mode of 1.

Summary

Five of the six factors appear to be considered problems for orthopedically impaired children. Factor 1, community recreation resources and Factor 5, community support services appear to be significant problems. Factor 4, Family Support, appeared to be a problem for only one child while the remaining seventeen rated this as not a problem.

The statements for both Factors 4 and 6 should be reviewed for revision or deletion since most of these statements had a mode of 1. An additional consideration would be score all questions considered not applicable to the child as 1, not a problem. This will allow each Factor to receive a score based on all five statements.

APPENDIX

Tables of Results Per Factor

Factor 1

Community Recreation Resources

	Statements					
Subjects	1	2	3	4	5	Total
1	3	3	3	3	1	13
2	2	3	3	3	2	13
3	1	3	1	3	1	9
4	3	3	3	3	1	13
5	3	1	3	2	3	12
6	3	3	3	3	1	13
7	3	3	3	3	2	14
8	2	2	2	3	2	14
9	2	3	1	1	1	8
10	3	3	3	3	1	13
11	3	3	2	3	1	12
12	2	2	1	3	1	9
13	3	1	1	1	3	9
14	3	2	2	3	2	12
15	1	1	1	3	1	7
16	2	1	1	1	1	6
17	2	2	2	3	1	10
18	1	1	1	3	1	7
Total	42	40	36	47	27	192
X	2.33	2.22	2.0	2.61	1.5	10.66
SD						2.54
MODE	3	3	3,1	3	1	13.00

Factor 2

Architectural Barriers

	Statements					
Subjects	1	2	3	4	5	Total
1	3	3	1	2	2	11
2	3	3	2	2	2	12
3	3	3	3	3	3	15
4	3	3	1	3	3	13
5	2	3	1	1	1	8
6	3	3	1	1	2	10
7	3	3	3	3	3	15
8	3	3	1	2	2	11
9	3	3	1	1	3	8
10	3	3	1	1	2	10
11	3	3	2	2	2	12
12	3	3	2	3	3	14
13	1	3	1	1	1	7
14	3	3	3	2	3	14
15	1	2	1	3	3	10
16	1	2	3	1	1	8
17	2	3	3	3	2	13
18	1	1	1	2	3	8
Total	42	50	31	36	41	199
X	2.33	2.77	1.72	2.0	2.27	11.05
SD						2.60
MODE	3	3	1	1,2,3	3	8.0

Factor 3

Transportation

Statements

Subjects	1	2	3	4	5	Total
1	3	1	3	1	1	9
2	3	1	3	1	1	9
3	3	1	3	1	1	9
4	3	3	3	1	1	11
5	1	3	1	1	1	7
6	3	1	2	1	1	8
7	3	1	1	1	1	7
8	3	3	2	3	3	14
9	3	1	1	1	1	7
10	3	1	1	1	3	9
11	3	3	3	3	3	15
12	3	3	3	1	1	11
13	1	1	1	3	2	8
14	3	3	2	1	1	10
15	1	1	1	1	1	5
16	2	1	1	1	1	6
17	3	1	1	1	1	7
18	1	1	2	1	1	6
Total	45	30	34	24	25	158
X	2.5	1.66	1.88	1.33	1.38	8.77
SD						2.67
MODE	3	1	1	1	1	9.00

Factor 4

Family Support

Statements

Subjects	1	2	3	4	5	Total
1	2	2	1	1	1	7
2	1	2	2	1	1	7
3	1	2	1	1	1	6
4	1	1	3	1	1	7
5	1	1	1	1	1	5
6	1	2	1	1	1	6
7	1	1	2	1	1	6
8	1	1	1	1	1	5
9	1	1	2	1	1	6
10	1	2	1	1	1	6
11	1	1	2	1	1	6
12	1	1	1	1	1	5
13	3	3	3	1	1	11
14	1	2	1	1	1	6
15	3	1	1	1	1	7
16	1	1	1	1	1	5
17	1	1	1	1	2	6
18	3	2	1	1	1	6
Total	23	32	26	18	19	113
X	1.27	1.77	1.44	1.0	1.05	6.27
SD						1.36
MODE	1	1	1	1	1	6.0

Factor 5

Community Support Services

	Statements					
Subjects	1	2	3	4	5	Total
1	2	3	3	3	1	12
2	2	2	3	2	2	11
3	2	3	3	2	1	11
4	3	3	2	3	3	14
5	1	2	1	3	2	9
6	3	3	3	3	3	15
7	3	3	3	2	2	13
8	2	2	3	2	2	11
9	3	3	3	1	3	13
10	3	3	3	3	3	15
11	2	2	3	1	2	10
12	3	3	1	2	3	12
13	3	3	3	3	3	15
14	1	3	3	3	3	13
15	3	3	3	3	2	14
16	3	3	2	3	3	14
17	2	3	3	2	3	13
18	2	3	2	1	2	10
Total	43	50	47	42	43	225
X	2.38	2.77	2.61	2.33	2.38	12.50
SD						1.85
MODE	3	3	3	3	3	13.00

Factor 6

Caregiver Support

	Statements					
Subjects	1	2	3	4	5	Total
1	2	1	1	2	2	8
2	2	1	1	2	2	8
3	2	1	1	2	1	7
4	2	1	1	1	1	6
5	1	1	1	1	1	5
6	2	1	1	1	2	7
7	2	1	1	2	2	8
8	2	1	1	1	3	8
9	3	1	1	1	2	8
10	3	1	1	3	1	9
11	2	2	2	3	3	12
12	3	1	2	2	3	11
13	3	1	3	3	1	11
14	3	1	3	3	3	13
15	1	1	1	1	1	5
16	1	1	1	1	1	5
17	1	1	2	2	1	7
18	1	1	1	1	2	6
Total	36	19	25	32	32	144
X	2.0	1.05	1.38	1.77	1.77	8.0
SD						2.40
MODE	2	1	1	1	1	8.0

MANUAL FOR UTILIZATION OF THE "ASSESSMENT OF ENVIRONMENTAL BARRIERS TO LEISURE EXPERIENCES" INSTRUMENT

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This project was supported in part by Grant No. G008005886 from the Office of Special Education, U.S. Department of Education. The opinions expressed herein do not necessarily reflect the opinion of the Office of Special Education or North Texas State University and no official endorsement should be inferred.

TABLE OF CONTENTS

	Page
Preface	i
Introduction	1
Rationale	1
AEBLE Instrument	3
Procedures for Administration	9
Test Administration	10
Estimated Time of Administration	10
General Instructions	11
Instructions for Scoring	13
Interpretation of Instrument	14
Development of the AEBLE Instrument	16
References	18

PREFACE

There are a variety of factors that can impede participation in and enjoyment of leisure experiences for orthopedically impaired children and youth. The following case study illustrates the importance of assessing and overcoming environmental barriers to leisure for these individuals. It illustrates the value and potential utilization of the AEBLE Planning Guide.

> Ernie is an eleven year old who has been in a wheelchair since he was two because of a spinal chord injury. He resides with his family in an urban setting.
>
> Ernie's teacher wants to determine the barriers which impede his participation in recreation activities. By utilizing the AEBLE instrument, she finds that Ernie doesn't attend community recreation centers because they do not offer activities for handicapped children.
>
> Ernie's teacher also discovers that even if programs were available, Ernie would be unable to enter the recreation center without great difficulty due to the revolving doors at the entrance. Once inside, many of the appliances and activites would remain inaccessible because of structural properties of the building, i.e., high tables, low clearance of the sinks, and high water fountains.
>
> In addition, Ernie's parents are afraid for his safety and they tend to discourage him from becoming involved in any kind of recreation activities.

By utilizing the AEBLE instrument, the teacher can pinpoint the significant barriers that Ernie encounters when attempting to participate in recreational activities. Using the AEBLE Profile Sheet, she is able to determine what are the most critical environmental factors that need to be dealt with.

From this information, the teacher proceeds to the AEBLE Planning Guide. On this form, the teacher lists the goals that need to be accomplished to aid Ernie in overcoming particular problem areas. For each listed goal, several strategies and responsibilities are suggested. For example, a recreation leader might be responsible for helping Ernie overcome barriers at the local recreation center while the teacher and Ernie are working with Ernie's parents to be more accepting of his independence. The teacher develops these strategies and responsibilities in order to attain the goals that must be achieved before these barriers are eliminated from Ernie's environment.

INTRODUCTION

The Assessment of Environmental Barriers to Leisure Experiences Instrument (AEBLE) is intended to quantitatively determine the most significant environmental barriers to the recreation and leisure participation of orthopedically impaired children. Environmental barriers are defined as factors within an environment that impinge on recreation and leisure experiences that are not under the direct influence or control of an orthopedically impaired child.

The AEBLE instrument yields a profile which indicates which of six factors pose serious barriers to an individual's recreation and leisure participation. Information gathered from the profile is then used to formulate an Action Plan to help the child overcome identified environmental barriers. The uniqueness of the AEBLE instrument is that it provides a profile that is individualized for each child and a guide for developing an action plan for overcoming specific environmental barriers that impede participation. The AEBLE instrument is designed to be used by teachers, therapists, recreation leaders,or parents.

RATIONALE

The benefits of participating in recreation activities include the opportunity to socialize with peers, the

opportunity to develop social, physical, and cognitive skills, the opportunity to develop self-confidence and self-esteem, and the opportunity to develop a sense of self-worth which will contribute to an individual's personal development as well as their being a contributing member of society.

There are a number of leisure assessment instruments which are designed to determine the strengths and/or weaknesses of individuals as well as assess their leisure interests (Hubert, 1969; Overs, 1974; McKechnie, 1974). These instruments primarily focus their attention on characteristics of the individual. It is assumed that remediation of these deficits will lead to improved leisure functioning.

The AEBLE instrument, on the other hand, attempts to assess factors in the environment which prevent the orthopedically impaired individual from participating in leisure activities. Utilization of the AEBLE instrument will avoid placing all responsibility for failure to participate on respondent characteristics and yield an understanding of the role of environmental barriers to recreation and leisure participation. Together with assessment instruments that focus on characteristics of the child, the AEBLE instrument can help give a balanced picture of critical constraints that impinge on leisure participation.*

*Within the context of the discussion of the AEBLE instrument, the terms recreation and leisure are thought to be synonymous and are used interchangeably.

THE AEBLE INSTRUMENT

The AEBLE instrument assesses the impact of six factors on recreation and leisure functioning. (See Footnote 1). These six factors are:

1. Community recreation resources for orthopedically impaired children.
2. Architectural barriers in the design of buildings used for recreation programs.
3. Family support for the child to participate in recreation programs.
4. Ancillary support services within the community which encourages participation in recreation activities.
5. Caregiver support for the child's leisure and recreation needs.
6. Transportation which is accessible and available to orthopedically impaired children.

Community recreation resources for the orthopedically impaired child refers to the presence or absence of programs which meet the needs of orthopedically impaired children. Public parks and recreation agencies for the most part usually serve the needs of the healthy, non-disabled members of society. A lack of programs for the handicapped reduces chances for these individuals to meet, socialize, and engage in recreation activities with other individuals including their non-disabled peers (King, 1980). On the other hand,

providing these opportunities provides the handicapped individual with a stronger self-concept and provides the non-disabled person with an opportunity to view the handicapped person as a competent individual (Prial, 1976).

Architectural barriers are both man-made and naturally occurring obstacles which are inherent in the design and construction of a facility. These barriers can impede the entry and subsequent participation in activities within the facility. The primary barriers in facilities include narrow doorways, stairs, protruding thresholds, revolving doors, and inaccessible equipment and drinking fountains. In some instances, even the poor location of a recreation facility can have a negative effect on the recreation of a handicapped individual (Stephens, 1978).

In addition to barriers created by the design of a facility, many barriers exist in the surrounding environment. The terrain surrounding a facility may be too steep or rugged to allow movement by a person in a wheelchair or on crutches. The type of ground cover utilized, such as grass, wood chips, or sand, can also impede movement by wheelchairs or make the use of crutches hazardous. The resultant effect is that many handicapped individuals will not be able to participate in recreation activities conducted in such settings (Stone, 1971).

Family support for the child engaging in recreation

activities refers to members of the child's family providing various forms of emotional, physical, psychological, and financial support and encouragement for the handicapped child to participate in leisure activities. The child is embedded in the family system, and the family is usually the most powerful source of support for the child in developing and enhancing his or her sense of self-worth and functional ability (Lyon, 1973; Power, 1979). Family support for the child's participation in recreation provides the child with additional motivation to develop skills. Through participation in recreation experiences, the child develops a greater sense of self-reliance and competence and therefore reduces his or her dependency on the family members for recreation activities. On the other hand, a family system that over protects and restricts the handicapped child for whatever reason, fosters a great deal of dependence on the part of the child. The result is a child with a severely limited realm of recreation opportunities (Perske, 1972).

Support services within the community are those programs designed to supplement existing recreation programs available to the handicapped child. Support services are found in the educational system, social service agencies and advocacy programs for the handicapped. The educational system is a primary contact for children. It is here that

they learn the academic ability and motivation to succeed in life. In addition, schools help teach about recreation activities. However, most recreation activities offered in most educational systems center around physical development and competition. Few schools offer the means for handicapped children to engage in these activities, and this exclusion helps to create the spectator role for handicapped individuals. In addition, the opportunity to learn a wide range of artistic, dramatic, hobby and other recreational skills is usually absent.

Advocacy groups have begun to increase the awareness of society to the needs of the handicapped. With the cooperation of many social service agencies such as United Way, March of Dimes, and others, a wide range of recreation activities are now becoming available to the handicapped. Advocacy groups, however, concentrate on dependency or a narrow range of activities for the handicapped.

Caregiver response to the child's needs refer to all those individuals who are entrusted with the care of the child during the child's day. The caregiver can be parents, guardians, grandparents, relatives, teachers, therapists, or recreation leaders. Their response to the child's recreation needs include acting as an advocate, providing transportation to and from a recreation facility, or direct service delivery to the child. Barriers arise when the response to the child prevents or hinders the child's development

or opportunities in some way.

Many times in providing recreation, caregivers tend to be over-protective of the child in order to prevent injury. In reality, caregivers do not exhibit this behavior with non-disabled participants. Caregivers may view the handicapped child with feelings of pity or sorrow, and these feelings create a need to protect the child and not allow him or her the opportunity to engage in activities which may be perceived as risky (Perske, 1976).

Accessible and available transportation enables a handicapped individual to move about his or her community with minimal assistance. Transportation involves both the public transit system such as buses and cabs, as well as the services provided by private transportation enterprises and family automobiles. Transportation plays a large role in a child's daily activities. Usually orthopedically impaired children are dependent upon others to travel from one place to another. The availability of transportation which is accessible by handicapped individuals means that the individual has the independence to go and do whatever they want, including attending recreation activities. The absence of suitable transportation significantly reduces the independence of the handicapped individual. This situation can arise when a bus or automobile is not equipped to handle a wheelchair, or an individual is unable to negotiate the steps on a bus or unable to maneuver into a

seat. The lack of transportation designed to accommodate these special situations has a negative effect on the possibilities of participation in recreation activities for handicapped individuals.

The presence of any or all of these factors tends to increase the dependency of the handicapped on others for satisfying their recreation activities. Skill development, enhanced self-worth, competence, and socialization are all part of becoming a contributing member of society and fully enjoying leisure experiences. Identifying barriers to the development of these skills will allow the child and his/her support system to actively plan means of overcoming or circumventing these barriers and participating more actively in leisure.[1]

The AEBLE instrument was developed based on these six factors. An interview guide has been developed to assess the relative importance of each of the six factors. Each guide contains a series of questions which the interviewercan utilize to elicit responses. Additional questions can be added at the discretion of the interviewer to help obtain more complete information about a given factor.

PROCEDURES FOR ADMINISTRATION

The "Assessment of Environmental Barriers to Leisure Experiences" Instrument (AEBLE) is designed to be administered by a teacher, therapist, recreation leader, or parent familiar with the child. Information gathered from the instrument can and should be supplemented by knowledge of the child from the teacher, therapist or recreation leader.

The instrument uses an interview to obtain information about the child's perception of difficulties he or she has in participating in recreation activities. The interview should be conducted in an area or small room free from visual or auditory distractions. The teacher or therapist conducting the interview should first become familiar with both the definitions and descriptions of the six factors as well as with the six interview guides.

The interview guides are to serve as a starting point for the interviewer. The questions are to be answered by the respondent as either: 1) "Not a Problem For Me", 2) "Sometimes a Problem For Me", 3) "Usually A Problem For Me". For each question, the child should be asked to clarify his or her answer. The response to each question is recorded on the interview guide. Once all the questions have been answered and clarified, the interviewer may wish to ask

additional questions for further clarity. As each factor is completed,the child can be asked how he or she feels about the factor in general. When all of the factors have been completed, the interviewer may wish to make additional comments.

Test Administration

The AEBLE instrument should be individually administered to children. The following steps should help in collecting useful information.

Estimated Time Of Administration

The estimated time for the completion of the AEBLE instrument is thirty (30) minutes which allows five (5) minutes for each factor.

GENERAL INSTRUCTIONS

Please read this and all remaining instruction sections very carefully.

Protocol (Steps to Administer the Instrument)

STEP 1 - Read and familiarize yourself with the rationale of the AEBLE project.

STEP 2 - Read and carefully familiarize yourself with the six (6) factors of the AEBLE instrument.

STEP 3 - Arrange and select the dates and times for the individual administration of the AEBLE instrument. Also pick alternate dates and times during the following week in case a given child is absent, sick, or otherwise unavailable.

STEP 4 - Identify and secure the necessary room(s) for the administration of the instrument. The room should have the following:

- tables and chairs
- adequate lighting
- adequate air conditioning or heat
- be void of major distractions or noise

You will need the room for approximately one-half hour to forty-five minutes per child.

STEP 5 - Make the determination whether or not each selected child is capable of coming to the scheduled room and completing the survey with minimal assistance. If not, you will need to schedule them for an alternative site.

STEP 6 - Set up the room for the administration of the instrument. Be sure to have the following items:

- The AEBLE instrument and manual
- The AEBLE answer sheet
- Pen or pencil

STEP 7 - Bring the child to the testing area and seat him/her at the table.

STEP 8 - Read the following statement of purpose of the instrument to the child:

"YOU ARE GOING TO HELP ME FIND OUT ABOUT WHAT KINDS OF THINGS EITHER HELP YOU OR STOP YOU FROM PARTICIPATING IN RECREATIONAL ACTIVITIES. THE WAY WE'RE GOING TO FIND OUT ABOUT THESE THINGS IS THAT I WILL ASK YOU A QUESTION AND YOU CAN ANSWER EACH QUESTION BY SAYING: "THIS IS NOT A PROBLEM FOR ME", "THIS IS SOMETIMES A PROBLEM FOR ME", OR "THIS IS USUALLY A PROBLEM FOR ME".

Example:

QUESTION: "IT'S DIFFICULT FOR ME TO GET FROM THE PARKING LOT INTO A BUILDING."

ANSWER: "THIS IS USUALLY A PROBLEM FOR ME BECAUSE I NEED ASSISTANCE GETTING OUT OF THE CAR, OVER CURBS, OR THROUGH THE DOORS."

STEP 9 - Then ask, "Are there any questions?"

STEP 10 - Tell the child that there are no right or wrong answers. You are only interested in their opinions or ideas.

STEP 11 - Administer the instrument:

A. Proceed to Factor 1 of the Interview Guide (Community Recreation Resources). Make any extra notes which you feel will help you score this area under the questions for each factor.

B. Proceed to Factor 2 (Architectural Barriers)

C. Proceed to Factor 3 (Family Support)

D. Proceed to Factor 4 (Community Support Services)

E. Proceed to Factor 5 (Caregiver Support)

F. Proceed to Factor 6 (Transportation)

STEP 12 - Then ask, "Are there any questions?"

STEP 13 - Refer to the Scoring Guide and score the instrument.

Instructions for Scoring

For Factors 1 to 5 there are five (5) questions per factor and the answer to each question will be scored from one to three points. (Procedures for factor 6 dealing with transportation barriers will be handled differently).

Score each question in the folliwing manner:

Usually a Problem - 3 points

Sometimes a Problem 2 points

Not a Problem - 1 point

Total the points for each factor separately by adding the scores of each of the five (5) questions.

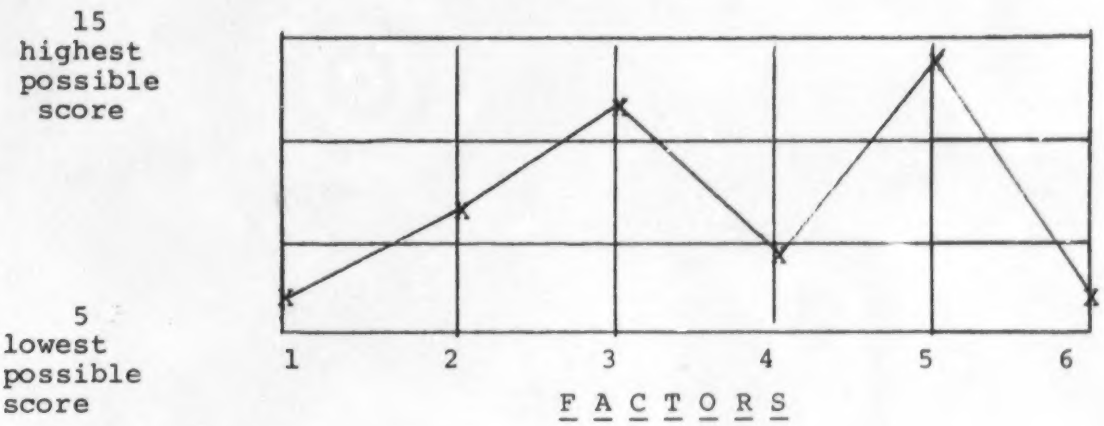
For the transportation factor only three questions are asked. To make scores commensurate with the previous factor, multiply the total scores by 1.6 and round off the nearest whole number.

Now, refer to the Profile Sheet and mark the appropriate score for the corresponding factor:

Example: Factor 1 might receive a score of 9 points. Place an "X" on the point where the score of "9" would intersect with the line for Factor 1.

Follow this procedure until each of the five factors have been scored. For a clearer illustration, join the marks to reveal the environmental barriers profile for the child.

Example:



Interpretation of the Instrument

The scores for the Profile Sheet are divided into three levels. A factor with a score falling in the range between 5 and 7 inclusive, would be considered not a signficant environmental barrier to the child's leisure participation. Factors with scores falling in the range between 8 and 11 inclusive would be considered as somewhat of an environmental barrier for leisure participation. Factors with scores falling into the range between 12 and 15 would be considered significant environmental barriers for the leisure participation of the child. The factors in a range of 12 to 15 should be immediately targeted for corrective action.*

*It should be noted that these domains are somewhat arbitrary. The experience and judgment of the tester may also be utilized to determine cut-off points.

There may be several scores in the top two levels. To determine which factor(s) are more important, rank the factors on the basis of their score from highest (most important) to lowest (not very important). The factor that is ranked first could be the one which will receive the most attention. Lower ranked factors would receive proportionately less attention.

Now proceed to the AEBLE Planning Guide for steps to overcome identified barriers.

FOOTNOTE

[1]Development of the AEBLE Instrument

The AEBLE instrument was developed through a literature search and a survey involving park and recreation professionals.

The literature review included examination of current articles, textbooks, and dissertations in the field of psychology, education, sociology, and leisure studies dealing with the various environmental barriers encountered by orthopedically impaired children. The review of literature led to the identification of three environmental elements which would seem to have an influence on the leisure participation of a handicapped child. These environmental elements were identified as the physical environment, the human environment, and the organizational/political environment.

The identification of the environmental elements led to the development of a preliminary survey of environmental barriers which was designed to determine the relative importance of each of the three major elements and sub-areas within each element. The survey contained twenty-eight statements, twelve addressing the physical environment, eight addressing the human environment, and eight addressing the organizational/political environment.

The survey instrument was completed by 12 recreation professionals in the Dallas-Fort Worth metroplex area. The data was analyzed, and six factors were created from the

responses. The data were analyzed using a principle component factor analysis with R^2 for the communalities. Six factors were rotated to simple structure based on an eigenvalue greater than or equal to 1.00 using a varimax procedure. Sixty four percent of the variance was accounted for by these six factors. The six factors are as follows:

1. Community recreation resources for the orthopedically impaired children.
2. Architectural barriers in the design of facilities used for recreation.
3. Family support for the child to participate in recreation programs.
4. Ancillary support services within the community.
5. Caregiver support to the child's leisure and recreation needs.

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ASSESSMENT OF

ENVIRONMENTAL BARRIERS

TO LEISURE EXPERIENCES

Interview Guide

And

Instructions

Division of Recreation and Leisure Studies
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This project was supported in part by Grant No. G008005886 from the Office of Special Education, U.S. Department of Education. The opinions expressed herein do not necessarily reflect the opinion of the Office of Special Education or North Texas State University and no official endorsement should be inferred.

TABLE OF CONTENTS

	Page
General Instructions	1
Profile Sheet	3
Factor 1: Community Resources	4
Factor 2: Architectural Barriers	5
Factor 3: Family Support	6
Factor 4: Support Services	7
Factor 5: Caregiver Support	8
Factor 6: Transportation	9
The AEBLE Plan	10
AEBLE Planning Form	13
Example: AEBLE Planning Form	14
Example: Profile Sheet	15

General Instructions

Before you begin to use the AEBLE instrument, read the section in the manual entitled, "The AEBLE Instrument". In that section, there is a description and definition of each of the six factors on the AEBLE instrument. These definitions will assist you in understanding the purpose of each of the six groups of questions. Also read the section entitled, "Protocol".

It is recommended that the following steps be used as steps in completing the AEBLE interview guides:

STEP 1--Make any notes in the space provided which will help to understand the answer given by the child.

STEP 2--Repeat the range of possible answers and explain each to the child.

3--Usually A Problem means that the statement describes a problem for the child which occurs when he/she tries to participate in recreation activities.

2--Sometimes A Problem means that depending on the situation, the statement read may cause the child a problem, but not all the time.

1--Not A Problem means that the problem described does not usually affect the child's recreation participation.

STEP 3--Begin with Factor 1 and read the first statement to the child.

STEP 4--Circle the appropriate number that correlates with the child's response in the appropriate space.

STEP 5--Read the next statement and circle the appropriate number of the child's response.

STEP 6--Continue until all statements for that factor have been circled.

STEP 7--Answer any questions the child might have.

STEP 8--Total the scores for the five statements and go on to the next factor. For Factor 6 (transportation) there are only three questions. You will need to multiply the total score for this factor by 1.6 to give it equal weight with the other areas.

STEP 9--When all six factors have been completed, refer to the section entitled, "Scoring" for further instructions.

PROFILE SHEET

Name of Child _____

Name of Interviewer _____

Age _____

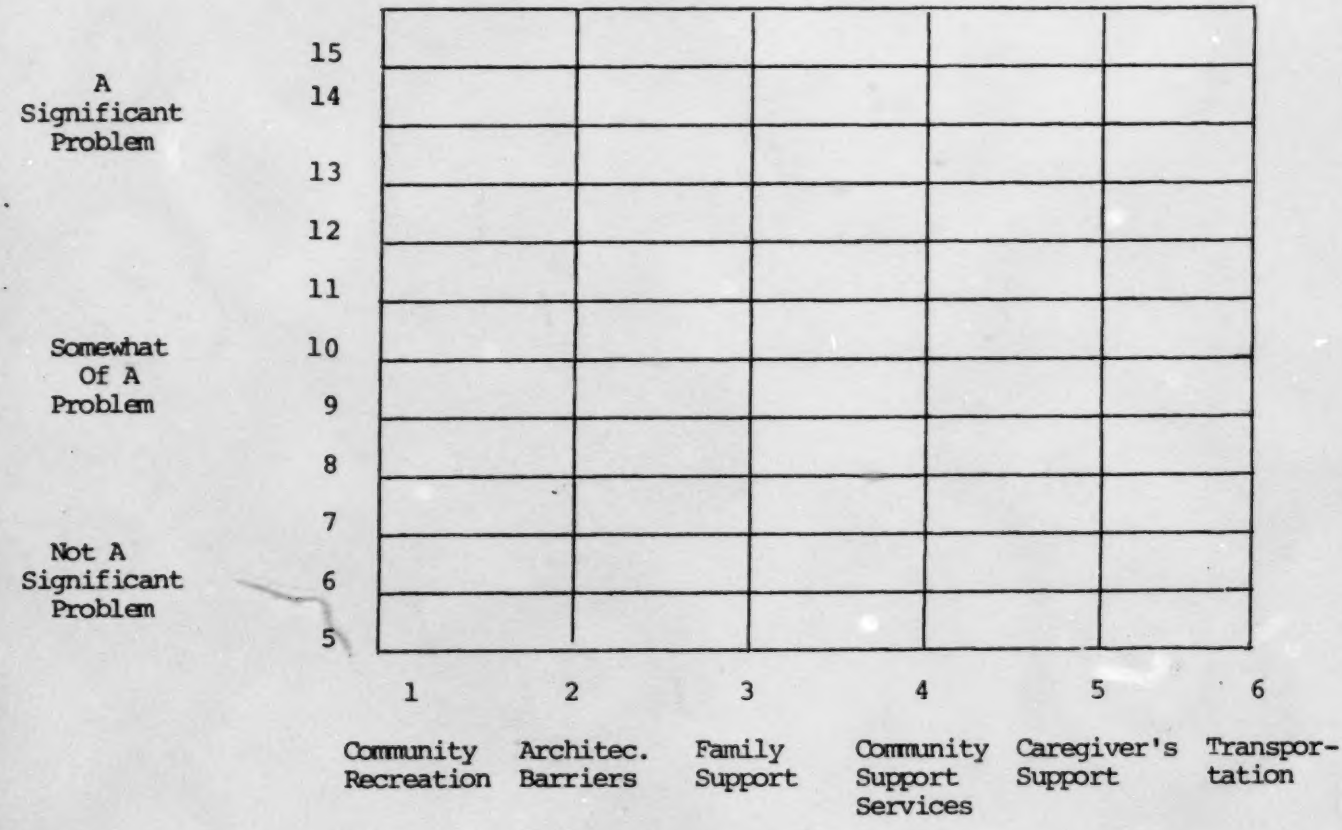
Position/ Title _____

Sex _____

Date _____

Disability _____

Name of Facility _____



FACTOR 1: COMMUNITY RESOURCES

COMMUNITY RECREATION RESOURCES FOR ORTHOPEDICALLY IMPAIRED CHILDREN

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	I don't go to recreation centers because they don't offer activities I can join. COMMENTS:
1	2	3	I don't go to movie theatres, bowling alleys, or amusement centers because the way they are built makes it hard to get around. COMMENTS:
1	2	3	I don't go to the park because it's too hard to move around on grass or rough ground. COMMENTS:
1	2	3	I don't go to the playground because the equipment is just too difficult to use. COMMENTS:
1	2	3	I don't attend summer camp because there aren't any camps that have programs for kids like me. COMMENTS:

_____ Total Score for Factor 1 (Transfer to Profile Sheet)

Proceed to Factor 2

FACTOR 2: ARCHITECTURAL BARRIERS

ARCHITECTURAL BARRIERS IN THE DESIGN OF RECREATION FACILITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	It's difficult for me to get from the parking lot into a building. COMMENTS:
1	2	3	Narrow doors and stairways make it hard for me to around a building. COMMENTS:
1	2	3	Tables and chairs are not easy for me to use because of their height. COMMENTS:
1	2	3	It's hard for me to join in any outdoor activities unless they are done on hard surface. COMMENTS:
1	2	3	Bad weather makes it hard for me to get around outside because the sidewalks get wet and the ground gets too soft. COMMENTS:

_____ Total score for Factor 2 (Transfer to Profile Sheet)

Proceed to Factor 3

FACTOR 3: FAMILY SUPPORT

FAMILY SUPPORT FOR THE CHILD TO PARTICIPATE IN RECREATION ACTIVITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	My parents don't take me to local recreation activities. COMMENTS:
1	2	3	My parents don't like for me to participate in recreation activities because I might get hurt. COMMENTS:
1	2	3	My brothers or sisters don't encourage me to get involved in recreation activities. COMMENTS:
1	2	3	My family doesn't include me in many of their recreation activities as a participant. COMMENTS:
1	2	3	My family doesn't help me get the most out of my recreation activities. COMMENTS:

_____ Total Score for Factor 3 (Transfer score to Profile Sheet)

Proceed to Factor 4

FACTOR 4: SUPPORT SERVICES

SUPPORT SERVICES IN THE COMMUNITY WHICH ALLOW FOR RECREATION ACTIVITIES

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	There aren't any recreation programs for me at my school. COMMENTS:
1	2	3	There aren't any recreation programs for me in my neighborhood. COMMENTS:
1	2	3	My church doesn't offer any recreation activities for me. COMMENTS:
1	2	3	There aren't any local organizations such as the Lions Club, Kiwanis, or the Rotary that offer recreation activities for me. COMMENTS:
1	2	3	There aren't any recreation programs offered by any of the neighborhood service groups like United Way or the Y.M.C.A. COMMENTS:

_____ Total Score for Factor 4 (Transfer score to Profile Sheet)

Proceed to Factor 5

FACTOR 5: CAREGIVER SUPPORT

CAREGIVER SUPPORT FOR THE RECREATION NEEDS OF THE CHILD

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	My teacher doesn't encourage me join in recreation activities. COMMENTS:
1	2	3	My parents don't encourage me join in recreation activities. COMMENTS:
1	2	3	My relatives don't encourage me join in recreation activities. COMMENTS:
1	2	3	When I'm at a recreation activity, the leader doesn't try to get me involved. COMMENTS:
1	2	3	My therapists don't know enough about my recreation needs to encourage my participation in activities. COMMENTS:

_____ Total Score for Factor 5 (Transfer score to Profile Sheet)

Proceed to Factor 6

FACTOR 6: TRANSPORTATION

ACCESSIBLE AND AVAILABLE TRANSPORTATION FOR HANDICAPPED CHILDREN

NOT A PROBLEM	SOMETIMES A PROBLEM	USUALLY A PROBLEM	
1	2	3	There is a lack of accessible and convenient public transportation systems for me to use (buses, taxis), in order to get to community recreation facilities. COMMENTS:
1	2	3	My parents or other family members are unable to drive me to recreation activities. COMMENTS:
1	2	3	There are no local agencies (Lions Club, United Way, etc.) that provide transportation for the handicapped. COMMENTS:

_____ Total Score for Factor 6 (Transfer score to Profile Sheet)

THE AEBLE PLAN

Once the AEBLE instrument has been administered, scored, and interpreted, it is recommended that an Action Plan be completed that can be used to help the child overcome environmental barriers to his or her leisure participation.

The AEBLE plan has been designed so that one or several environmental barriers can be analyzed. Once goals are identified, strategies can be formulated which will outline in detail means to overcome or eliminate a particular environmental barrier.

The AEBLE plan is composed of five sections: a) Goals, b) Strategies, c)Responsibilities, d) Duration, and e) Evaluation. The summary sheet is used as a reference guide on which the goals and strategies are listed in an abbreviated style. This allows for a person to obtain a quick overview of the environmental factors that are being worked on. Further detail about each goal is then found on the appropriate detail sheets.

The "Goals" section is where the goal for each child is listed. The goal(s) should address overcoming a particular environmental barrier to leisure participation. For example, a child may find that the local recreation center doesn't offer recreation programs for the handicapped. A goal may then be to get the recreation center to offer programs which can be participated in by handicapped children.

Once the goal has been identified, a strategy for accomplishing the goal should be outlined. The strategy may be broken down into general steps. Refer to the example plan for

an illustration. This breakdown of each strategy allows for the evaluation of the success of each step, and planning strategy changes if necessary.

A strategy for the goal stated above could be broken down into: a) contacting the recreation center to determine what programs are offered, b) finding out which one the child wants to join, c) determining ways which would allow for participation by the child such as modifying the activity, the equipment, or its location (further strategies could be added to this list).

The "Responsibility" section is used to designate who has the responsibility for undertaking each of the proposed strategy steps. Responsibility may belong to the child, teacher, therapist, recreation leader, parent, or some combination of these people. The child, teacher, or therapist may be responsible for contacting the local recreation center and finding out about their various programs. It should be the child's responsibility to determine which programs he or she wants to participate in. The recreation leader then becomes responsible for helping the child participate in the recreation activity.

The section marked "Duration" is used to indicate when the steps to overcome a particular barrier will be initiated and when a given barrier is expected to be overcome. The time required is based upon an estimation of the time required to successfully complete each step of the strategy.

The "Evaluation" section is used for evaluating the success of each of the strategy steps. The evaluation should be used to find out whether it is necessary to alter, continue, or

rewrite the goal or strategy. For example, after an evaluation, it may be determined that specialized equipment is needed to help the child participate in the recreation activity. Also, the activity may have to be modified in order for the child to receive the maximum benefit from it.

The AEBLE plan is to be used as a guide in helping the child overcome or eliminate environmental barriers to his or her leisure participation. In the process of planning a strategy for dealing with a specific environmental barrier, it may be necessary to teach the child a new method for coping with the environmental barrier until a permanent change in the environment can be facilitated. For example, in the description of Ernie (see Preface), it was stated that Ernie's family is afraid for his safety so they tend to discourage any interest or involvement in community recreation. A possible solution to this environmental barrier is helping Ernie's family change their attitude to become more open to his recreation needs. However, until this is achieved, the therapist may have to teach Ernie how to behave more independently in order to prove his abilities.

The AEBLE plan provides a mechanism for improving the environmental conditions which prohibit leisure participation of the handicapped. Use of the plan provides the means for identifying these environmental barriers which are significant problems for handicapped children. As a result of identifying goals to be achieved, the child is able to engage in recreation activities of his choice and enjoy a happier, healthier lifestyle.

AEBLE PLANNING FORM

Date _____

Name of Child: _____ Age _____ Sex _____ Disability _____

Name of Interviewer: _____ Position/Title _____ Name of Facility _____

Factor(s) to be corrected: _____

GOAL	STRATEGY	RESPONSIBILITY	DATE BEGUN	DATE COMPLETED	EVALUATION

EXAMPLE

AEBLE PLANNING FORM

Date 8-21-81

Name of Child: Ernie S. Age 11 Sex M Disability Spinal Cord Trauma

Name of Interviewer: Michael A. Position/Title Teacher Name of Facility Crockett Elem. School

Factor(s) to be corrected: 1. Community Recreation Sources
2. Transportation Systems

GOAL	STRATEGY	RESPONSIBILITY	DATE BEGUN	DATE COMPLETED	EVALUATION
1. To increase the availability of recreation programs that Ernie can participate in at the local community recreation center.	1a) Contact local recreation center.	1a) Teacher	9-1-81	9-15-81	a) Talked to Director She's very supportive
	1b) Determine what programs are offered.	1b) Teacher, recreation leader	9-15-81	9-16-81	b) A large realm of programs are offered
	1c) Determine which programs or activities Ernie is interested in.	1c) Ernie, teacher	9-16-81	9-16-81	c) Swimming & chess
					d) Join chess club & get qualified instructor
	1d) Modify activities if necessary.	1d) Teacher, recreation leader	9-16-81	10-5-81	
2. To develop an appropriate and adequate transportation system for Ernie to use to get to and from the recreation center.	2a) Get bus schedule and fare rates.	2a) Teacher	9-1-81	9-2-81	2a) Talked to bus company
	2b) Determine where Ernie can get on a bus.	2b) Teacher, recreation leader	9-1-81	9-2-81	2b) Talked to bus company
	2c) Determine if Ernie is able to get on and off a bus.	2c) Teacher and Ernie	9-3-81	9-5-81	2c) Ernie is able to get on & off the bus.

14

130

131

PROFILE SHEET

Name of Child: Ernie S

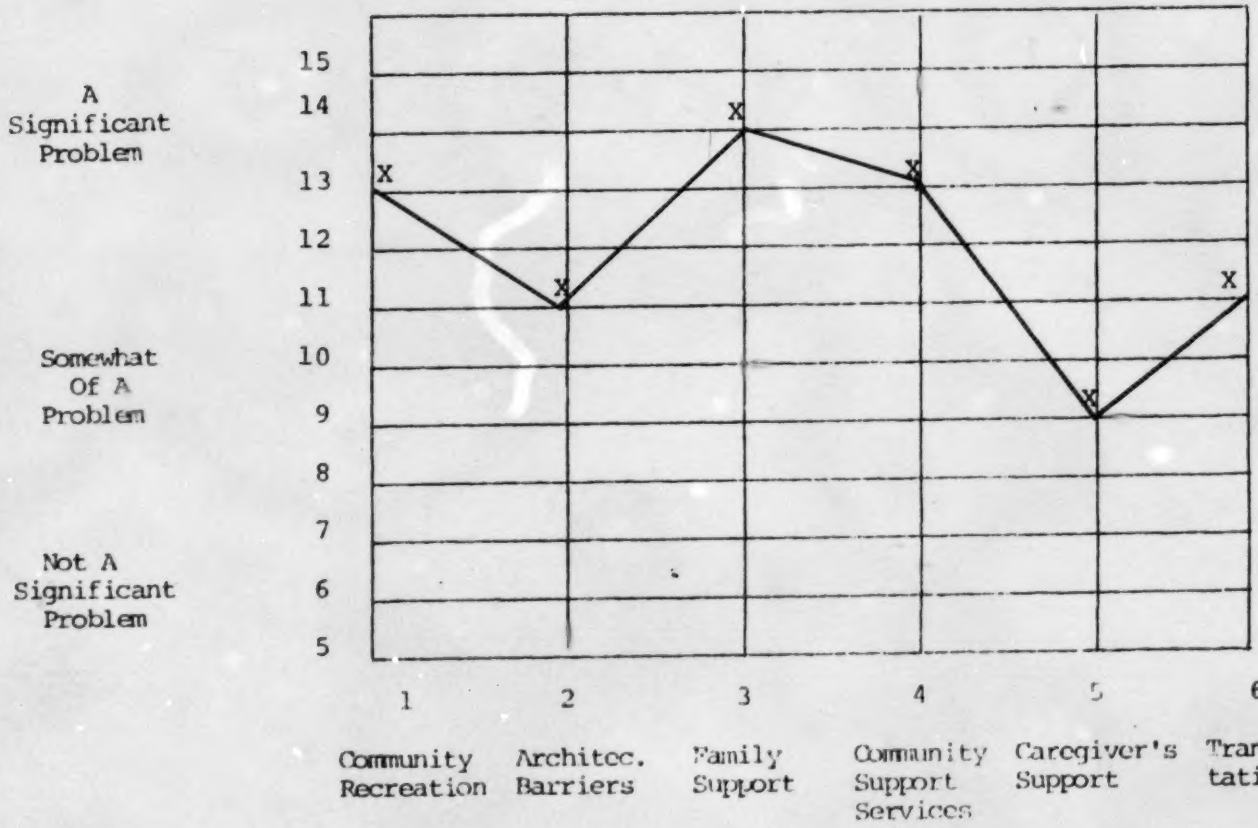
Name of Interviewer: Michael A.

Age: 11

Position/ Title: Teacher

Sex: M

Date: 9-1-81

Disability: Spinal Cord Trauma

Name of Facility: Crockett Elementary School